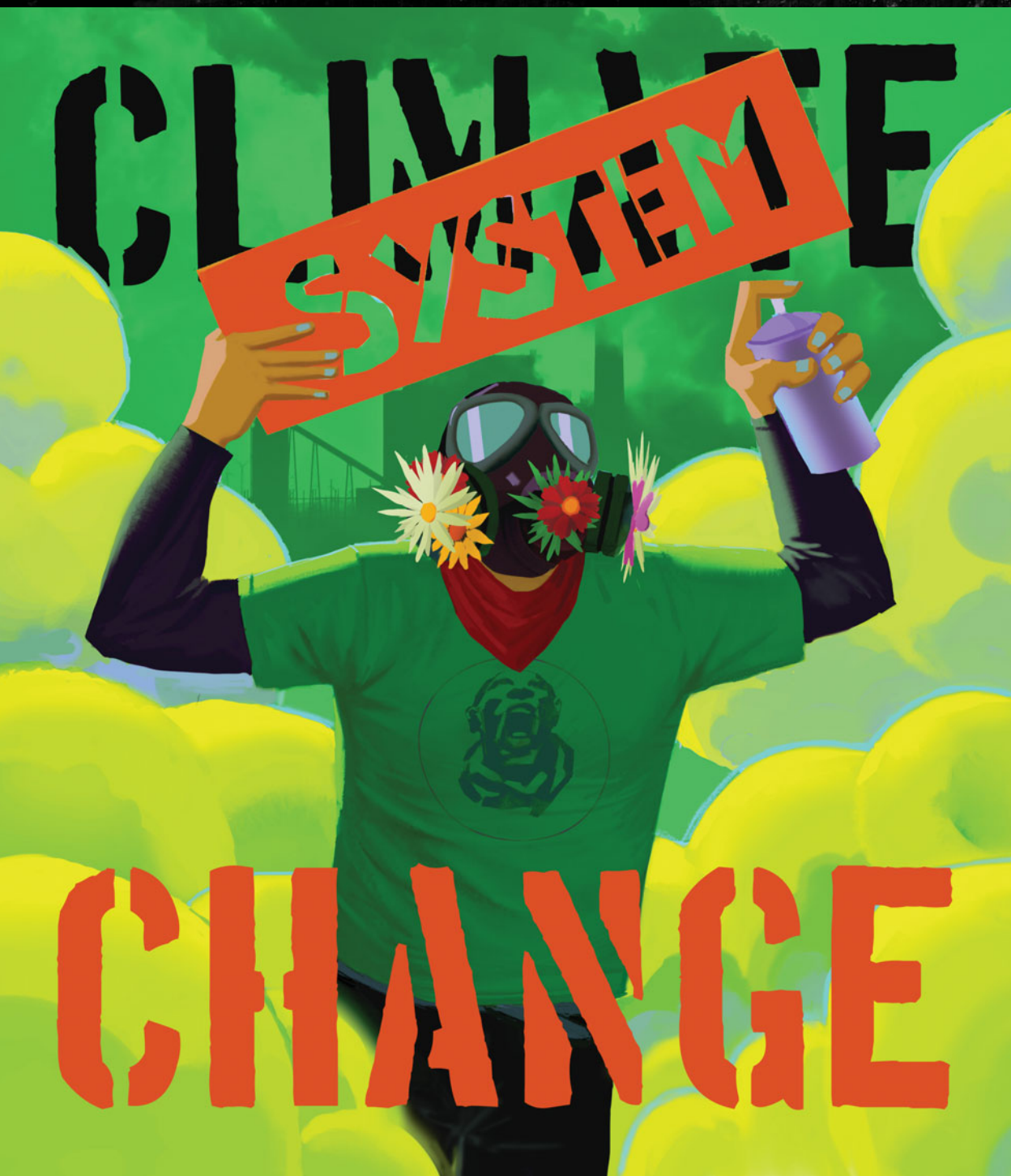
ROAR

Reflections on a Revolution

ISSUE #7 - AUTUMN 2017

Tokar ★ Moore & Patel ★ Shiva ★ Anderson
Humble ★ Buxton ★ Buckland ★ Malm ★ Roos





7

Issue #7

System Change

Let us not flatter ourselves overmuch on account of our human conquest over nature. For each such conquest takes its revenge on us.

— FRIEDRICH ENGELS

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EDITORIAL

Living Through the Catastrophe

In January 2017, the Science and Security Board of the *Bulletin of Atomic Scientists* moved the infamous Doomsday Clock featured on the cover of its journal to 2.5 minutes before the hour — the second-closest to midnight it has been since its inception in 1947. "This year's deliberations felt more urgent than usual," the Board noted, citing the existential threats posed by climate change and rising nuclear tensions between the Trump administration and North Korea. "The probability of global catastrophe is very high, and the actions needed to reduce the risks of disaster must be taken very soon."

A quick glance at the headlines appears to confirm this gloomy assessment. From the rapid succession of tropical storms ravaging the Caribbean and the spate of unprecedented forest fires raging across southern Europe and the western US, to the deadly mudslides in West Africa and the worst monsoon flooding to hit South Asia in years, the past twelve months have seen an unusually high frequency and intensity of climate-related natural disasters. By late October, the year 2017 was on track not only to join 2015 and 2016 in the top-three hottest years on record, but — for the United States at least — also to become the most expensive ever in terms of extreme weather damage.

As the empirical evidence continues to mount, then, it is rapidly becoming clear that the threat of catastrophic man-made climate change can no longer be considered a distant prospect. It is already here. In a highly symbolic development earlier this year, the so-called Doomsday Vault, built deep inside the Arctic to protect the seeds of billions of food crops from regional crises or environmental disasters, flooded after the permafrost in which it is embedded suddenly began to melt. As a Nor-

wegian official explained, "it was not in our plans [when the Norwegian government built the vault 10 years ago] to think that the permafrost would not be there and that it would experience extreme weather like that." This is how fast things can change in the space of a decade.

Now that the atmospheric and planetary implications of two hundred years of capitalist development and the associated systemic dependence on fossil-fuel combustion are beginning to manifest themselves in the form of increasingly unpredictable weather patterns, it is slowly starting to dawn on large parts of the world population that climate change has become a material force to be reckoned with *in the present*. A recent report by *The Lancet* finds that hundreds of millions of people around the globe are already being affected by the health consequences of rising temperatures, ranging from crop failures and undernourishment to heatstrokes and the spread of infectious diseases.

With the notable exception of Donald Trump, most world leaders are still formally committed — through the Paris Agreement of 2016 — to reducing carbon emissions fast enough to avoid anything more than an already very dangerous two-degree increase in global temperatures by 2100. In reality, however, they are doing nothing to avoid the worst-case scenario. The World Bank now warns that the planet is on course for a four-degree increase by 2100 — a scenario that, according to Kevin Anderson of the Tyndall Centre for Climate Change Research in the UK, "is incompatible with any reasonable characterization of an organized, equitable and civilized global community."

Yet even the World Bank's estimates are widely considered to be on the conservative side; many experts believe that a business-as-usual scenario would lead to something far worse. The International Energy Agency, for one, estimates that a continuation of current trends would set the world on course for a six-degree increase by 2100, rendering the vast majority of the planet entirely uninhabitable for humans — and, indeed, for most existing species. When global temperatures reached a comparable level at the end of the Permian, some 251 million years ago, 90 percent of species were wiped out.

And as if this were not enough reason to be deeply concerned, scientists are increasingly starting to raise the alarm about a number of other looming ecological crises as well. In November, a group of over 15,000 scientists from 184 countries signed an open "letter to humanity" warning of the potentially disastrous consequences of widespread deforestation and the sixth mass extinction. To this, we should add the threats posed by the combination of water loss, soil and fish stock depletion,

plastic waste and pollution. Even more acute, it seems, is the bee colony collapse that has been unfolding over the past decade, and the related "insectageddon" that — according to one recent study — has reduced Germany's flying insect population by 75 percent over the past 27 years. The complex knock-on effects of these dramatic changes on wider ecosystems and agricultural production are not yet fully understood, but are likely to be highly disruptive, if not outright catastrophic.

As public awareness of these developments grows, many people find themselves riven by an increasingly acute sense of anxiety — about the state of the world we live in, about the self-reinforcing disorder that appears to have grabbed a hold of late-capitalist society, about the relentless death drive of global capital that has sent humanity careening towards the abyss of ecological self-destruction. The resultant social malaise, fruit of a generalized sense of helplessness wrought by neoliberalism's decades-long assault on all expressions of popular power and collective agency, has penetrated deep into the body politic. "No one is in control," the late sociologist Zygmunt Bauman once noted. "That is the major source of contemporary fear."

The truth is that a dystopian end-times imaginary has been stirring in the collective subconscious for some time already. The radical theorist Mark Fisher, who passed away earlier this year after a protracted battle with depression, called this condition *capitalist realism* — or the widespread conviction that, even if the systemic imperative of infinite growth on a finite planet is pushing our species headlong into extinction, there is simply no alternative to the present order of things. This has left us in a situation in which, as Frederic Jameson famously put it 15 years ago, it has become "easier to imagine the end of the world than to imagine the end of capitalism."

The reign of capitalist realism appears to be further entrenched by the fact that, in some respects, we are already living through this epochal denouement. The "end of the world" is now unfolding before our eyes as a grim spectacle, widely represented in popular culture and screaming at us daily from increasingly alarmist newspaper headlines. "The catastrophe," Fisher wrote of *Children of Men*, that masterwork of contemporary dystopian cinema, "is neither waiting down the road, nor has it already happened. Rather, it is being lived through. There is no punctual moment of disaster; the world doesn't end with a bang, it winks out, unravels, gradually falls apart."

In the wake of the disturbing political developments of the past year, with the rise of Trump and Brexit throwing the liberal postwar order

into profound disarray, the emergent realization that we are already *living through the catastrophe* now seems to loom increasingly large. Last October, for instance, when hurricane Ophelia unleashed its fury upon Ireland (the farthest north that such a major tropical tempest has ever been recorded), and a thick layer of sand swept up by the storm over the Sahara combined with smoke and debris from the Spanish forest fires to shroud the financial district of London in an eerie yellowish hue, social media feeds across the UK lit up with references to impending doom. Much of this was sardonic, to be sure, but the millenarian irony clearly resonated with the apocalyptic zeitgeist that has come to define the popular mood of the early twenty-first century.

Notably, those in power are not impervious to this cultural climate of socio-ecological catastrophism. In fact, the rich seem to be keenly aware of what is coming their way, and are already preparing for the worst. One particularly telling indication of growing elite anxiety is the spread of survivalism — or "doomsday prep" — among America's ultra-wealthy elite. Earlier this year, an investigation in *The New Yorker* revealed how libertarian Silicon Valley and Wall Street billionaires like Peter Thiel of Paypal are rapidly losing faith in the ability of political leaders and the democratic system to keep the situation under control. In response, they have been buying up luxury condos inside converted nuclear missile silos in remote rural areas and self-sufficient boltholes in New Zealand to ride out the institutional breakdown and civil disorder that are likely to accompany a possible nuclear holocaust or climate apocalypse, in what the *Financial Times* has called "the latest craze for a global super-rich hedging against the collapse of the capitalist system."

With this, we arrive at the crux of the problem: the fact that not everyone will be equally vulnerable to the unfolding catastrophe. Like every other crisis under capitalism, the climate crisis — and the ecological crisis more generally — will have profound social and political implications. As in finance, the costs of the crisis will be borne overwhelmingly by those who are least responsible for causing it, while those most to blame will likely find creative ways to escape the worst consequences — at least for a while. Long before rising sea levels, scorching temperatures and civilizational collapse leave vast stretches of the planet uninhabitable, the super-rich will seek to establish a regime of global eco-apartheid to manage the resultant disorder and shield themselves from the inevitable mass migrations and debilitating social unrest, hiding behind a rapidly expanding authoritarian complex of militarized police, mass surveillance, drone warfare, concentration camps and border walls.

Climate change, then, cannot be understood in isolation from its social, political and economic context, including the structural violence of the neoliberal shock doctrine, the systemic logic of extractivism, the asymmetric integration of the Global South into the world economy, the concentrated power of the fossil fuel industry, the investment decisions of the big banks and financial institutions, or the deep-seated inequalities of class, race and gender that lie at the heart of capitalist society. As the environmental historian and critical geographer Jason Moore has forcefully argued, there is "a profound interconnection between biophysical transformations and biophysical problems and crises, on the one hand, and the central institutions of the capitalist world economy, on the other — of financial markets, of large transnational firms, of capital intensive agriculture." The ecological crisis, in short, is inextricably bound up with the general crisis of late capitalism.

It follows that the central focus of action should not just be on reducing global carbon emissions, but on confronting the underlying asymmetries in the balance of power and making sure that those who benefited most from the extraction, sale and combustion of fossil fuels end up paying for the burden of adaptation and the worldwide transition to a renewable energy future. Crucially, this fight cannot be waged on the basis of failed multilateral negotiations, elusive technological fixes or flaunted emission reduction targets; it inevitably necessitates a broad-based popular struggle for *climate justice* — involving not only radical action to mitigate the worst effects of global warming, but also extensive technology transfer and the payment of sizeable and sustained reparations for the enormous climate debt that the wealthy citizens of the Global North owe the poor of the North and the South alike, especially the Indigenous peoples who have been at the front-lines of the struggle against extractivism since the days of European colonialism.

It has long since become clear that piecemeal reform and corporate techno-utopianism will do little to resolve the structural drivers behind the present ecological calamity. As one recent study has shown, 71 percent of global emissions can be traced back to the activities of just 100 mega-corporations. If anything, this indicates that we are confronted not by a Malthusian crisis of over-population, as many liberal environmentalists in the Global North continue to argue, but by a clear-cut Marxian crisis of unbridled over-*accumulation*, which has brought about an "irreparable rift" in the metabolic interaction between humanity and the rest of nature. What we are living through, in short, is the *Capitalocene* — a distinct geological epoch in which the capitalist formula of "accumulation for accumulation's sake, production for production's sake" has penetrated into every nook and cranny of the

planet's biophysical environment, to the point where the survival of the capitalist system has come to constitute an existential threat to the survival of humanity as a whole.

The only sustainable solution now lies in a profound transformation of the global political economy and the market-based social relations that underpin it — especially in the way we produce, distribute and consume things to meet human needs, wants and desires. While we can no longer reverse climate change or completely undo ecological destruction, we can still mitigate the worst consequences, adapt to the inevitable fallout and avoid wholesale eco-civilizational collapse. But doing so will require a veritable revolution in the underlying production, energy and transport systems, which will inevitably involve an epic showdown with the concentrated power of capital, including not only the fossil fuel industry but also global finance, industrial agriculture and the aviation and automotive industries, which will fight tooth and nail to preserve their privilege to poison the soil, oceans and atmosphere and make life impossible for the rest of us. Clearly, if we leave it up to them, the response will amount to nothing but empty talk and endless tinkering at the margins.

This seventh print issue of *ROAR Magazine* does not pretend to offer any concrete policy proposals, nor a detailed roadmap for the coming clean energy transition — even if such political interventions will certainly be very necessary. Rather, the aim is to shed further light on the profoundly *social* and *political* nature of the climate crisis, and to emphasize the importance of rebuilding popular power from below. Taken together, the contributions collected on these pages set out to problematize some of the ideological assumptions of the mainstream narrative, which completely overlooks the systemic nature of the problem, continuing to prescribe highly individualized solutions, market-based technological fixes and the further commodification of nature in place of the transformative social change the world so desperately needs. Against these neoliberal delusions, we must stand firm and insist: the real catastrophe is capitalism, and the only acceptable outcome *system change*, not climate change. As unrealistic as this may seem from the dominant perspective of capitalist realism, the future of our species — and that of countless others — now depends on it.

Jerome Roos
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roarmag.org



Jason W. Moore & Raj Patel

Yesterday at 23:59 on page 16

Unearthing the Capitalocene

The perspective of world ecology allows us to see how the modern world's violent and exploitative relationships are rooted in five centuries of capitalism — and how these unequal arrangements are today in the midst of unprecedented crisis.



Like Comment Share



April Humble

Yesterday at 23:59 on page 40

Open the Borders! Welcoming Climate Refugees

The rules of border control will need to be rewritten to make migration an option for those fleeing the consequences of climate destabilization.



Like Comment



Brian Tokar

Yesterday at 23:59 on page 28

Communalism against Climate Chaos

The theory and praxis of social ecology remains our best hope to fend off a dystopian future and meaningfully reshape the fate of humanity on this planet.



Like Comment Share



William C. Anderson

Yesterday at 23:59 on page 48

Ecological Crisis and the State of Disarray

Could the revolutionary intercommunalism of the Black Panthers provide an answer to the state's purposeful neglect of vulnerable communities during natural disasters?



Like Comment Share



Vandana Shiva
Yesterday at 23:59 on page 58

Seed Freedom and the Future of Farming

An interview with Vandana Shiva

In an era of climate change, rejuvenating and regenerating the soil through ecological processes has become a survival imperative for the human species.



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Nick Buxton
Yesterday at 23:59 on page 84

Defying Dystopia: Shaping the Climate Future We Want

To counter the injustice of climate change, we must oppose the disempowering visions of the future laid out for us by military planners and Malthusians.



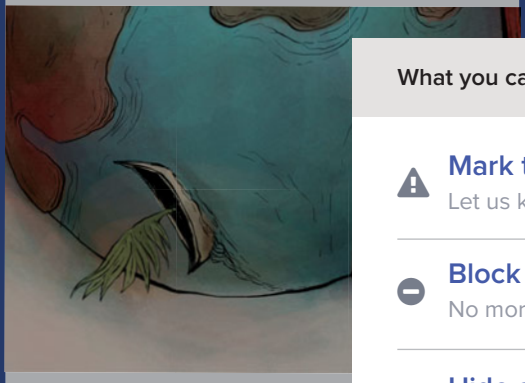
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Kevin Buckland
Yesterday at 23:59 on page 72

Organizing on a Sinking Ship: The Future of the Climate Justice Movement

Our response to the climate crisis has been to rearrange deckchairs on the Titanic — but whatever we do, it isn't working. It's time to try something new.



Like Comment



Andreas Malm
Yesterday at 23:59 on page 98

Time to Pull the Plugs

Capital will not lead the exit from the fossil economy. Only a movement of movements can amass a social power greater than the enemy's in the little time that is left.



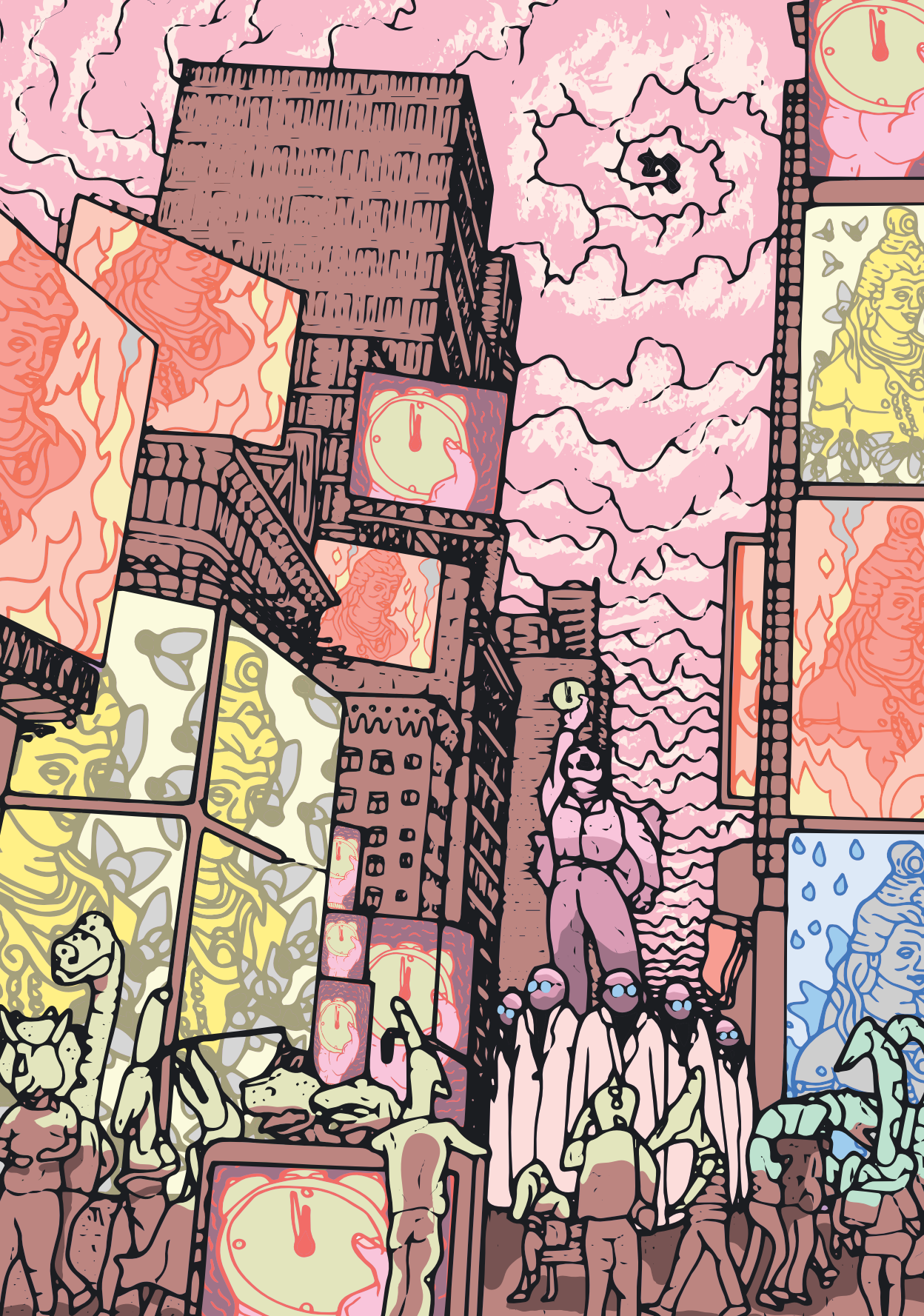
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PLANETARY CRISIS

UNEARTHING TOWARDS

THE PERSPECTIVE OF WORLD ECOLOGY ALLOWS US TO SEE HOW THE MODERN WORLD'S VIOLENT AND EXPLOITATIVE RELATIONSHIPS ARE ROOTED IN FIVE CENTURIES OF CAPITALISM — AND HOW THESE UNEQUAL ARRANGEMENTS ARE TODAY IN THE MIDST OF UNPRECEDENTED CRISIS.

Illustration by **Istvan David**



Settled agriculture, cities, nation-states, information technology and every other facet of the modern world have unfolded within a long era of climatic good fortune. Those days are gone. Sea levels are rising; climate is becoming less stable; average temperatures are increasing. Civilization emerged in a geological era known as the Holocene. Some have called our new climate era the Anthropocene. Future intelligent life will know we were here because some humans have filled the fossil record with such marvels as radiation from atomic bombs, plastics from the oil industry and chicken bones.

THE CAPITALOCENE:

A REPARATIONS €COLOGY

Jason W. Moore & Raj Patel



What happens next is unpredictable at one level and entirely predictable at another. Regardless of what humans decide to do, the twenty-first century will be a time of "abrupt and irreversible" changes in the web of life. Earth system scientists have a rather dry term for such a fundamental turning point in the life of a biospheric system: state shift. Unfortunately, the ecology from which this geological change has emerged has also produced humans who are ill-equipped to receive news of this state shift. Nietzsche's madman announcing the death of god was met in a similar fashion: although industrial Europe had reduced divine influence to the semi-compulsory Sunday-morning church attendance, nineteenth-century society couldn't imagine a world without god. The twenty-first century has an analogue: it's easier for most people to imagine the end of the planet than to imagine the end of capitalism.

We need an intellectual state shift to accompany our new epoch. The first task is one of conceptual rigor, to note a problem in naming our new geological epoch the Anthropocene. The root, *anthropos* (Greek for "human"), suggests that it's just humans being humans, in the way that kids will be kids or snakes will be snakes, that has caused climate change and the planet's sixth mass extinction. It's true that humans have been changing the planet since the end of the last ice age. A hunting rate slightly higher than the replenishment rate over centuries, together with shifting climate and grasslands, spelled the end for the Columbian Plains mammoth in North America, the orangutan's overstuffed relative the *Gigantopithecus* in east Asia, and the giant Irish elk *Megaloceros giganteus* in Europe. Humans may even have been partly responsible for tempering a global cooling phase 12,000 years ago through agriculture-related greenhouse gas emissions.

Hunting large mammals to extinction is one thing, but the speed and scale of destruction today can't be extrapolated from the activities of our knuckle-dragging forebears. Today's human activity isn't exterminating mammoths through centuries of overhunting. Some humans are currently killing everything, from megafauna to microbiota, at speeds one hundred times higher than the background rate. We argue that what changed is capitalism, that modern history has, since the 1400s, unfolded in what is better termed the Capitalocene. Using this name means taking capitalism seriously, understanding it not just as an economic system but as a way of organizing the relations between humans and the rest of nature.

SEVEN CHEAP THINGS

In our new book, *A History of the World in Seven Cheap Things* (University of California Press), we show how the modern world has been made through seven cheap things: nature, money, work, care, food, energy and lives. Every word in that sentence is difficult. Cheap is the opposite of a bargain — cheapening is a set of strategies to control a wider web of life that includes humans. "Things" become things through armies and clerics and accountants and print. Most centrally, humans and nature don't exist as giant seventeenth-century billiard balls crashing into each other. The pulse of life-making is messy, contentious and mutually sustaining. Our book introduces a way to think about the complex relationships between humans and the web of life that helps make sense of the world we're in and suggests what it might become.

As a teaser, let's return to those chicken bones in the geological record, a capitalist trace of the relation between humans and the world's

most common bird, *Gallus gallus domesticus*. The chickens we eat today are very different from those consumed a century ago. Today's birds are the result of intensive post-World War II efforts drawing on genetic material sourced freely from Asian jungles, which humans decided to recombine to produce the most profitable fowl. That bird can barely walk, reaches maturity in weeks, has an oversize breast, and is reared and slaughtered in geologically significant quantities (more than 60 billion birds a year). Think of this relationship as a sign of Cheap Nature.

> ***We argue that what changed is capitalism, that modern history has, since the 1400s, unfolded in what is better termed the Capitalocene.***

Already the most popular meat in the United States, chicken is projected to be the planet's most popular flesh for human consumption by 2020. That will require a great deal of labor. Poultry workers are paid very little: in the United States, two cents for every dollar spent on a fast-food chicken goes to workers, and some chicken operators use prison labor, paid twenty-five cents per hour. Think of this as Cheap Work.

In the US poultry industry, 86 percent of workers who cut wings are in pain because of the repetitive hacking and twisting on the line. Some employers mock their workers for reporting injury, and the denial of injury claims is common. The result for workers is a 15 percent decline in income for the ten years after injury. While recovering, workers will depend on their families and support networks, a factor outside the circuits of production but central to their continued participation in the workforce. Think of this as Cheap Care.

The food produced by this industry ends up keeping bellies full and discontent down through low prices at the checkout and drive-through. That's a strategy of Cheap Food.

Chickens themselves are relatively minor contributors to climate change — they have only one stomach each and don't burp out methane like cows do — but they're bred in large lots that use a great deal of fuel to keep warm. This is the biggest contributor to the US poultry industry's carbon footprint. You can't have low-cost chicken without abundant propane: Cheap Energy.

There is some risk in the commercial sale of these processed birds, but through franchising and subsidies, everything from easy financial and physical access to the land on which the soy feed for chickens is grown — mainly in China, Brazil and the United States — to small business loans, that risk is mitigated through public expense for private profit. This is one aspect of Cheap Money.

Finally, persistent and frequent acts of chauvinism against categories of human life — such as women, the colonized, the poor, people of color and immigrants — have made each of these six cheap things possible. Fixing this ecology in place requires a final element — the rule of Cheap Lives.

Yet at every step of this process, humans resist — from the Indigenous peoples whose

flocks provide the source of genetic material for breeding through poultry and care workers demanding recognition and relief to those fighting against climate change and Wall Street. The social struggles over nature, money, work, care, food, energy and lives that attend the Capitalocene's poultry bones amount to a case for why the most iconic symbol of the modern era isn't the automobile or the smartphone but the Chicken McNugget.

> ***"The most iconic symbol of the modern era isn't the automobile or the smartphone but the Chicken McNugget.***

All this is forgotten in the act of dipping the chicken-and-soy product into a plastic pot of barbeque sauce. Yet the fossilized trace of a trillion birds will outlast — and mark the passage of — the humans who made them. That's why we present the story of humans, nature and the system that changed the planet as a short history of the modern world: as an antidote to forgetting.

CIVILIZATIONAL COLLAPSE

It's not some genetic code — or some human impulse to procreate — that has brought us to this point. It's a specific set of relationships between humans and the biological and physical world. Civilizations don't collapse because humans reproduce too fast and starve, as Robert Malthus warned in his *Essay on the Principles of Population*. Since 1970, the number of malnourished people has remained above 800 million, yet few talk of the end of civilization. Instead, great historical transitions occur because "business as usual" no longer works. The powerful have a way of sticking to time-honored strategies even when the reality is radically changing. So it was with feudal Europe. The Black Death was not simply a demographic catastrophe. It also tilted the balance of forces in European society.

Feudalism depended on a growing population, not only to produce food but also to reproduce lordly power. The aristocracy wanted a relatively high peasant population, to maintain its bargaining position: many peasants competing for land was better than many lords competing for peasants. But feudalism was a system born of an earlier climate. Historians call this the Medieval Warm Period — it was so balmy that vineyards reached Norway. That changed at the dawn of the fourteenth century. Climate may not be destiny, but if there is a historical lesson from climate history, it's that ruling classes don't survive climate transitions. Feudalism's class-enforced monocultures crumbled in the face of the Little Ice Age: famine and disease quickly followed.

As a result, with the onset of the Black Death, webs of commerce and exchange didn't just transmit disease — they became vectors of mass insurrection. Almost overnight, peasant revolts ceased being local affairs and became large-scale threats to the feudal order. After 1347 these uprisings were synchronized — they were system-wide responses to an epochal crisis, a fundamental breakdown in feudalism's logic of power, production and nature.

& HEALTHY & DELICIOUS

GREAT FOOD

THE AUTHENTIC TASTE OF THE Capitalocene

cheap food

WHAT GOES IN CHEAP, COMES OUT CHEAP!

cheap nature



A NICE FAT CHICKEN BREAST IS JUST AN INJECTION AWAY!

cheap money

WITH THE COMPLIMENTS OF YOUR CORPORATE GOVERNMENT!

cheap lives



WHO CARES ABOUT A CHICKEN MORE OR LESS, OR A WORKER FOR THAT MATTER?

cheap work

WHY PAY WORKERS MORE IF WE CAN PAY THEM LESS?

FANTASTIC AND AUTHENTIC

Best CUISINE



CHICKEN NUGGETS

BREAKFAST : LUNCH : DINNER

cheap care



WHO NEEDS LEGS TO WORK AT A CONVEYOR BELT?

cheap energy

LET'S BURN SOME COAL TO KEEP THEM CHICKS NICE AND WARM!



LES TRÈS RICHES HEURES DU DUC DE BERRY
VIA WIKIMEDIA COMMONS

The Black Death precipitated an unbearable strain on a system already stretched to the breaking point. Europe after the plague was a place of unrelenting class war, from the Baltics to Iberia, London to Florence. Peasant demands for tax relief and the restoration of customary rights were calls that feudalism's rulers could not tolerate. If Europe's crowns, banks and aristocracies could not suffer such demands, neither could they restore the *status quo ante*, despite their best efforts. Repressive legislation to keep labor cheap, through wage controls or outright re-enserfment, came in reaction to the Black Death. Among the earliest was England's Ordinance and Statute of Labourers, enacted in the teeth of the plague's first onslaught (1349–51). The equivalent today would be to respond to an Ebola epidemic by making unionization harder.

The labor effects of climate change were abundantly clear to Europe's aristocrats, who exhausted themselves trying to keep business very much as usual. They failed almost entirely. Nowhere in western or central Europe was serfdom reestablished. Wages and living standards for peasants and urban workers improved substantially, enough to compensate for a decline in the overall size of the economy. Although this was a boon for most people, Europe's 1 percent found their share of the economic surplus contracting. The old order was broken and could not be fixed.

Capitalism emerged from this broken state of affairs. Ruling classes tried not just to restore the surplus but to expand it. That was easier said than done, however. East Asia was wealthier, so although its rulers also experienced socio-ecological tribulations, they found ways to accommodate upheaval, deforestation and resource shortages in their own tributary terms. One solution that reinvented humans' relation to the web of life was stumbled upon by the Iberian ar-

> *The labor effects of climate change were abundantly clear to Europe's aristocrats, who exhausted themselves trying to keep business very much as usual. They failed almost entirely.*

istocracy — in Portugal and Castile above all. By the end of the fifteenth century, these kingdoms and their societies had made war through the *Reconquista*, the centuries-long conflict with Muslim powers on the peninsula, and were so deeply dependent on Italian financiers to fund their military campaigns that Portugal and Castile had in turn been remade by war and debt.

The mix of war debt and the promise of wealth through conquest spurred the earliest invasions of the Atlantic. The solution to war debt was more war, with the payoff being colonial profit on new, great frontiers. The modern world emerged from systematic attempts to fix crises at this frontier. What followed was an epochal transition: one that reinvented the surplus around a cocktail of banking, slaving and killing.

THE PERSPECTIVE OF WORLD-ECOLOGY

Our view of capitalism is part of a perspective that we call world-ecology. World-ecology has emerged in recent years as a way to think through human history in the web of life. Rather than begin with the separation of humans from the web of life, we ask questions about how humans — and human arrangements of power and violence, work and inequality — fit within nature. Capitalism is not just part of an ecology but *is* an ecology — a set of relationships integrating power, capital and nature. So when we write — and hyphenate — world-ecology, we draw on older traditions of "world-systems" to

say that capitalism creates an ecology that expands over the planet through its frontiers, driven by forces of endless accumulation.

To say world-ecology is not, therefore, to invoke the "ecology of the world" but to suggest an analysis that shows how relations of power, production and reproduction work through the web of life. The idea of world-ecology allows us to see how the modern world's violent and exploitative relationships are rooted in five centuries of capitalism and also how these unequal arrangements — even those that appear timeless and necessary today — are contingent and in the midst of unprecedented crisis. World-ecology, then, offers something more than a different view of capitalism, nature and possible futures. It offers a way of seeing how humans make environments and environments make humans through the long sweep of modern history.

This opens space for us to reconsider how the ways that we have been schooled to think of change — ecological, economic, and all the rest — are themselves implicated in today's crises. That space is crucial if we are to understand the relationship between naming and acting on the world. Movements for social justice have long insisted on "naming the system" because the relationships among thought, language and emancipation are intimate and fundamental to power. World-ecology allows us to see how concepts we take for granted — like Nature and Society — are problems not just because they obscure actual life and history but because they emerged out of the violence of colonial and capitalist practice.

The idea of world-ecology allows us to see how the modern world's violent and exploitative relationships are rooted in five centuries of capitalism.

Modern concepts of Nature and Society were born in Europe in the sixteenth century. These master concepts were not only formed in close relation to the dispossession of peasants in the colonies and in Europe but also themselves used as instruments of dispossession and genocide. The Nature/Society split was fundamental to a new, modern cosmology in which space was flat, time was linear and nature was external. That we are usually unaware of this bloody history — one that includes the early-modern expulsions of most women, Indigenous Peoples and Africans from humanity — is testimony to modernity's extraordinary capacity to make us forget.

"Understanding capitalism as a world-ecology of power, capital, and nature helps us see how deeply each half of these is embedded in the other, how mightily the powerful have worked to police the sharp boundaries between them, and how forcefully those boundaries have been contested."

JASON W. MOORE & RAJ PATEL

A History of the World in Seven Cheap Things

World-ecology therefore commits not only to rethinking but to remembering. Too often we attribute capitalism's devastation of life and environments to economic rapaciousness alone, when much of capitalism cannot be reduced to economics. Contrary to neoliberal claptrap, businesses and markets are ineffective at doing most of what makes capitalism run. Cultures, states and scientific complexes must work to keep humans obedient to norms of gender, race and class. New resource geographies need to be mapped and secured, mounting debts repaid, coin defended. World-ecology offers a way to recognize this, to remember — and see anew — the lives and labors of humans and other natures in the web of life.

THE AFTERLIVES OF CHEAP THINGS

There is hope in world-ecology. To recognize the webs of life-making on which capitalism depends is also to find new conceptual tools with which to face the Capitalocene. As justice movements develop strategies for confronting planetary crisis — and alternatives to our present way of organizing nature — we need to think about the creative and expanded reproduction of democratic forms of life.

A wan environmentalism is unlikely to make change if its principal theory rests on the historically bankrupt idea of immutable human separation from nature. Unfortunately, many of today's politics take as given the transformation of the world into cheap things. Recall the last financial crisis, made possible by the tearing down of the boundary between retail and commercial banking in the United States. The Great Depression's Glass-Steagall Act put that barrier in place to prevent future dealing of the kind that was understood to have knocked the global economy into a tailspin in the 1930s. American socialists and

communists had been agitating for bank nationalization, and Franklin Roosevelt's New Dealers offered the act as a compromise safeguard. When twenty-first-century liberal protesters demanded the return of Glass-Steagall, they were asking for a compromise, not for what had been surrendered to cheap finance: housing.

Similarly, when unions demand fifteen dollars an hour for work in the United States, a demand we have supported, a grand vision for the future of work is absent. Why should the future of care and food-service workers be to receive an incremental salary increase, barely enough on which to subsist? Why, indeed, ought ideas of human dignity be linked to hard work? Might there not be space to demand not just drudgery from work but the chance to contribute to making the world better? Although the welfare state has expanded, becoming the fastest-growing share of household income in the United States and accounting for 20 percent of household income by 2000, its transfers haven't ended the burden of women's work. Surely the political demand that household work be reduced, rewarded and redistributed is the ultimate goal?

We see the need to dream for more radical change than contemporary politics offers. Consider, to take another example, that cheap fossil fuel has its advocates among right-wing think tanks from India to the United States. While liberals propose a photovoltaic future, they can too easily forget the suffering involved in the mineral infrastructure on which their alternative depends. The food movement has remained hospitable to those who would either raise the price of food while ignoring poverty or engineer alternatives to food that will allow poverty to persist, albeit with added vitamins. And, of course, the persistence of the politics of cheap lives can be found in the return to supremacism from Russia and South Africa to the United States and China in the name of "protecting the nation." We aren't sanguine about the future either, given polling data from the National Opinion Research Center at the University of Chicago which found that 35 percent of baby boomers feel blacks are lazier/less hardworking than whites and 31 percent of millennials feel the same way.

While maintaining a healthy pessimism of the intellect, we find optimism of the will through the work of organizations that see far more mutability in social relations. Many of these groups are already tackling cheap things. Unions want higher wages. Climate change activists want to revalue our relationship to energy, and those who've read Naomi Klein's work will recognize that much more must change too. Food campaigners want to change what we eat and how we grow it so that everyone eats well. Domestic worker organizers want society to recognize the work done in homes and care facilities. The Occupy movement wants debt to be canceled and those threatened with foreclosure and exclusion allowed to remain in their homes. Radical ecologists want to change the way we think about all life on earth. The Movement for Black Lives, Indigenous groups and immigrant-rights activists want equality and reparation for historical injustice.

Each of these movements might provoke a moment of crisis. Capitalism has always been shaped by resistance — from slave uprisings to mass strikes, from anticolonial revolts through abolition to the organization for women's and Indigenous peoples' rights — and has always managed to survive. Yet all of today's movements are connected, and together they offer an antidote to pessimism. World-ecology can help connect the dots.

We do not offer solutions that return to the past. We agree with Alice Walker that "activism is the rent I pay for living on the planet" and that if there is to be life after capitalism, it will come

through the struggles of people on the ground for which they fight. We don't deny that if politics are to transform, they must begin where people currently find themselves. But we cannot end with the same abstractions that capitalism has made, of nature, society and economy. We must find the language and politics for new civilizations, find ways of living through the state shift that capitalism's ecology has wrought.

Activism is the rent we pay for living on the planet, and if there is to be life after capitalism, it will come through the struggles of people on the ground for which they fight.

Weighing the injustices of centuries of exploitation can resacralize human relations within the web of life. Redistributing care, land and work so that everyone has a chance to contribute to the improvement of their lives and to that of the ecology around them can undo the violence of abstraction that capitalism makes us perform every day. We term this vision "reparation ecology" and offer it as a way to see history as well as the future, a practice and a commitment to equality and reimagined relations for humans in the web of life. ★

This essay is an abridged excerpt from the introduction of Moore and Patel's new book, A History of the World in Seven Cheap Things: A Guide to Capitalism, Nature, and the Future of the Planet*, published by University of California Press in the US, Verso Books in the UK and Black, Inc. in Australia and New Zealand.*

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SOCIAL ECOLOGY



Brian Tokar

COMMUNAL

against climate chaos

Illustration by **Istvan David**

THE THEORY AND PRAXIS OF SOCIAL ECOLOGY REMAINS OUR BEST HOPE TO FEND OFF A DYSTOPIAN FUTURE AND MEANINGFULLY RESHAPE THE FATE OF HUMANITY ON THIS PLANET.


.ISM

Since the 1960s, the theory and praxis of social ecology have helped guide efforts to articulate a radical, counter-systemic ecological outlook with a goal of transforming society's relationship to non-human nature. For many decades, social ecologists have articulated a fundamental ecological critique of capitalism and the state, and proposed an alternative vision of empowered human communities organized confederally in pursuit of a more harmonious relationship to the wider natural world. Social ecology helped shape the New Left and anti-nuclear movements in the 1960s and 1970s, the emergence of Green politics in many countries, the alter-globalization movement of the late 1990s and early 2000s, and most recently the struggle for democratic autonomy by Kurdish communities in Turkey and Syria, along with the resurgence of new municipal movements around the world.

The philosophical vision of social ecology was first articulated by Murray Bookchin between the early 1960s and the early 2000s, and has since been further elaborated by his colleagues and many others. It is a unique synthesis of social criticism, historical and anthropological investigation, dialectical philosophy and political strategy. Social ecology can be viewed as an unfolding of several distinct layers of understanding and insight, spanning all of these dimensions and more. It begins with an appreciation of the fact that environmental problems are fundamentally social and political in nature, and are rooted in the historical legacies of domination and social hierarchy.

CAPITALISM AND CLIMATE CHANGE

Bookchin was among the first thinkers in the West to identify the growth imperative of the capitalist system as a fundamental threat to the integrity of living ecosystems, and he consistently argued that social and ecological concerns are fundamentally inseparable, questioning the narrowly instrumental approaches advanced by many environmentalists to address various issues. For climate activists today, this encourages an understanding that a meaningful approach to the climate crisis requires a systemic view of the centrality of fossil fuel combustion to the emergence and continued resilience of capitalism. Indeed, capitalism as we know it is virtually inconceivable without the exponential growth in energy usage — and widespread substitutions of energy for labor — that coal, oil and gas have enabled. As the UK-based Corner House research group explained in a 2014 paper:

> *"The entire contemporary system of making profits out of labor depended absolutely on cheap fossil carbon [and therefore] there is no cheap or politically-feasible substitute for fossil fuels in the triple combination of fossil fuels–heat engines–commodified labor that underpins current rates of capital accumulation.*

The perspective of social ecology thus allows us to see that fossil fuels have long been central to the capitalist mythos of perpetual growth. They have driven ever-increasing concentrations of capital in many economic sectors, and advanced both the regimentation and increasing precarity of human labor worldwide. In *Fossil Capital*, Andreas Malm explains in detail how early British industrialists opted to switch from abundant water power to coal-fired steam engines to run their mills, despite increased costs and uncertain reliability. The ability to control labor was central to their decision, as the urban poor proved to be vastly more amenable to factory discipline than the more

independent-minded rural dwellers who lived along Britain's rapidly flowing rivers. A century later, massive new oil discoveries in the Middle East and elsewhere would drive previously unfathomable increases in the productivity of human labor and breathe new life into the capitalist myth of unlimited economic expansion.

To address the full magnitude of the climate crisis and maintain a habitable planet for future generations we need to shatter that myth once and for all. Today the political supremacy of fossil fuel interests far transcends the magnitude of their campaign contributions or their short-term profits. It stems from their continuing central role in advancing the very system they helped to create. We need to overturn both fossil fuels and the growth economy, and that will require a fundamental rethinking of many of the core underlying assumptions of contemporary societies. Social ecology provides a framework for this.

THE PHILOSOPHY OF SOCIAL ECOLOGY

Fortunately, in this respect, the objectives of social ecology have continued to evolve beyond the level of critique. In the 1970s, Bookchin engaged in extensive research into the evolution of the relationship between human societies and non-human nature. His writing challenged the common Western notion that humans inherently seek to dominate the natural world, concluding instead that the domination of nature is a myth rooted in relationships of domination among people that emerged from the breakdown of ancient tribal societies in Europe and the Middle East.

Social ecology eschews the common view of nature as merely a realm of necessity, instead viewing nature as striving, in a sense, to actualize through evolution an underlying potentiality for consciousness, creativity and freedom.

Social ecology highlights egalitarian social principles that many indigenous cultures — both past and present — have held in common, and has elevated these as guideposts for a renewed social order: concepts such as interdependence, reciprocity, unity-in-diversity and an ethics of complementarity, that is, the balancing of roles among various social sectors by actively compensating for differences among individuals.

In his magnum opus, *The Ecology of Freedom*, Bookchin detailed the unfolding conflicts between these guiding principles and those of increasingly stratified hierarchical societies, and how this has shaped the contending legacies of domination and freedom for much of human history.

Beyond this, the philosophical inquiry of social ecology examines the emergence of human consciousness from within the processes of natural evolution. Reaching back to the roots of dialectical thought, from Aristotle to Hegel, Bookchin advanced a unique approach to eco-philosophy, emphasizing the potentialities that lie latent within the evolution of both natural and social phenomena while celebrating the uniqueness of human creativity and self-reflection. Social ecology eschews the common view of nature as merely a realm of necessity, instead perceiving nature as striving, in a sense, to actualize through evolution an underlying potentiality for consciousness, creativity and freedom.

For Bookchin, a dialectical outlook on human history compels us to reject what merely is and follow the potentialities inherent in evolution toward an expanded view of what could be, and ultimately what ought to be. While the realization of a free, ecological society is far from inevitable — and may appear ever less likely in the face of impending climate chaos — it is perhaps the most rational outcome of four billion years of natural evolution.

THE POLITICAL STRATEGY OF SOCIAL ECOLOGY

These historical and philosophical explorations in turn provide an underpinning for social ecology's revolutionary political strategy, which has been discussed previously in *ROAR Magazine* by several social ecology colleagues. This strategy is generally described as libertarian or confederal municipalism, or more simply as *communalism*, stemming from the legacy of the Paris Commune of 1871.

Like the communards, Bookchin argued for liberated cities, towns and neighborhoods governed by open popular assemblies. He believed that the confederation of such liberated municipalities could overcome the limits of local action, allowing cities, towns and neighborhoods to sustain a democratic counter-power to the centralized political institutions of the state, all while overcoming parochialism, promoting interdependence and advancing a broad liberatory agenda. Furthermore, he argued that the stifling anonymity of the capitalist market can be replaced by a moral economy in which economic as well as political relationships are guided by an ethics of mutualism and reciprocity.

Social ecologists believe that whereas institutions of capitalism and the state heighten social stratification and exploit divisions among people, alternative structures rooted in direct democracy can foster the expression of a general social interest towards social and ecological renewal. "It is in the municipality," Bookchin wrote in *Urbanization Without Cities*, "that people can reconstitute themselves from isolated monads into a creative body politic and create an existentially vital ... civic life that has institutional form as well as civic content."

People inspired by this view have brought structures of direct democracy through popular assemblies into numerous social movements in the US, Europe and beyond, from popular direct action campaigns against nuclear power in the late 1970s to the more recent alter-globalization and Occupy Wall Street movements. The prefigurative dimension of these movements — anticipating and enacting the various elements of a liberated society — has encouraged

THE INFLUENCE OF BOOKCHIN'S THOUGHT

Social ecology and social movements

1960'S

Underground distribution of Bookchin's essays arguing for a fundamentally radical ecology in contrast to technocratic environmentalism.



1970'S

Efforts to "green" cities and bring alternative, solar-based technologies into economically marginalized urban neighborhoods.

Movement against nuclear power in the US. Social ecology inspired decentralized anti-nuclear alliances committed to direct action, nonviolence, and grassroots organization.

Critical re-evaluation of "ecofeminism", seeking to re-evaluate the legacy of the historical links between women and non-human nature in Western culture, rejecting the essentialist and biological determinist notions commonly associated with ecofeminism.

1980'S

Emerging Green political movements in many countries became divided between advocates for conventional party politics and strategies rooted in radically democratic, ecologically-centered movements from below.

1990'S

Global Justice Movement raised support for a politics of direct democracy to challenge centralized economic and political institutions and established grassroots democratic organizing and decision-making structures that helped shape the aspirations of social movement actors for a generation to come.

2000'S

Social ecology has become a central theoretical and strategic influence for militants in the Kurdish regions of the Middle East, where ethnically diverse populations have created institutions of confederal direct democracy in one of the world's most war-torn regions.

participants to challenge the status quo while advancing transformative visions of the future. The concluding chapter of my recent book, *Toward Climate Justice* (New Compass 2014) describes these influences in some detail, with a focus on the anti-nuclear movement, green politics, ecofeminism and other significant currents from the past and present.

CONTRIBUTIONS TO CONTEMPORARY MOVEMENTS

Today, social ecologists are actively engaged in the global movement for climate justice, which unites converging currents from a variety of sources, most notably indigenous and other land-based people's movements from the Global South, environmental justice campaigners from communities of color in the Global North, and continuing currents from the global justice or alter-globalization movements of a decade ago. It is worth considering some of social ecology's distinct contributions to this broad-based climate justice movement in some greater detail.

First, social ecology offers an uncompromising ecological outlook that challenges the entrenched power structures of capitalism and the nation-state. A movement that fails to confront the underlying causes of environmental destruction and climate disruption can, at best, only superficially address those problems. Climate justice activists generally understand, for example, that false climate solutions such as carbon markets, geoengineering and the promotion of natural gas obtained from fracking as a "bridge fuel" on the path to renewable energy mainly serve the system's imperative to keep growing. To fully address the causes of climate change requires movement actors to raise long-range, transformative demands that the dominant economic and political systems may prove unable to accommodate.

Second, social ecology offers a lens to better comprehend the origins and historical emergence of ecological radicalism, from the nascent movements of the late 1950s and early 1960s right up to the present. Social ecology played a central role in challenging the inherent anti-ecological bias of much of twentieth-century Marxism-Leninism, and thus serves as an important complement to current efforts to reclaim Marx's ecological legacy. While the understanding of Marx's long-ignored ecological writings, advanced by authors such as John Bellamy Foster and Kohei Saito, is central to the emerging eco-left tradition, so are the political debates and theoretical insights that unfolded over many pivotal decades when the Marxist left was often vehemently uninterested in environmental matters.

Third, social ecology offers the most comprehensive treatment of the origins of human social domination and its historical relationship to abuses of the Earth's living ecosystems. Social ecology highlights the origins of ecological destruction in social relations of domination, in contrast to conventional views suggesting that impulses to dominate non-human nature are a product of historical necessity. To meaningfully address the climate crisis will require overturning numerous manifestations of the long historical legacy of domination, and an intersectional movement aimed toward challenging social hierarchy in general.

Fourth, social ecology offers a comprehensive historical and strategic grounding for realizing the promise of direct democracy. Social ecologists have worked to bring the praxis of direct democracy into popular movements since the 1970s, and Bookchin's writings offer an essential historical and theoretical context for this continuing conversation. Social ecology offers a comprehensive strategic outlook that looks beyond the role of popular assemblies as a form

of public expression and outrage, looking toward more fully realized self-organization, confederation and a revolutionary challenge to entrenched statist institutions.

Finally, social ecology asserts the inseparability of effective oppositional political activity from a reconstructive vision of an ecological future. Bookchin viewed most popular dissident writing as incomplete, focusing on critique and analysis without also proposing a coherent way forward. At the same time, social ecologists have spoken out against the accommodation of many alternative institutions — including numerous formerly radical cooperatives and collectives — to a stifling capitalist status quo.

To fully address the causes of climate change requires movement actors to raise long-range, transformative demands that the dominant economic and political systems may prove unable to accommodate.

The convergence of oppositional and reconstructive strands of activity is a crucial step towards a political movement that can ultimately contest and reclaim political power. This is realized within the international climate movement through the creation of new political spaces that embody the principles of "blockadia" and "alternatiba." The former term, popularized by Naomi Klein, was first coined by the activists of the Tar Sands Blockade in Texas, who engaged in an extended series of nonviolent actions to block the construction of the Keystone XL oil pipeline. The latter is a French Basque word, adopted as the theme of a bicycle tour that encircled France during the summer of 2015 and highlighted scores of local alternative-building projects. Social ecology's advocacy for creative human participation in the natural world helps us see how we can radically transform our communities, while healing and restoring vital ecosystems through a variety of sophisticated, ecologically-grounded methods.

GLOBAL INERTIA, MUNICIPAL RESPONSES

Following the celebrated but ultimately disappointing conclusion of the 2015 UN climate conference in Paris, many climate activists have embraced a return to the local. While the Paris Agreement is widely



CLIMATE MARCH IN WASHINGTON, DC, USA 2017
ROB CRANDALL / SHUTTERSTOCK.COM

praised by global elites — and activists rightly condemned the US Trump administration's announced withdrawal — the agreement has a fundamental flaw that largely precludes the possibility of its achieving meaningful climate mitigation. This goes back to Barack Obama and Hillary Clinton's interventions at the 2009 Copenhagen conference, which shifted the focus of climate diplomacy from the 1997 Kyoto Protocol's legally binding emissions reductions toward a system of voluntary pledges, or "Nationally Determined Contributions," which now form the basis of the Paris framework. Implementation and enforcement of the agreement are limited to what the Paris text describes as an international "expert-based" committee that is structured to be "transparent, non-adversarial and non-punitive."

Of course the Kyoto regime also lacked meaningful enforcement mechanisms, and countries such as Canada and Australia chronically exceeded their Kyoto-mandated emissions caps. The Kyoto Protocol also initiated an array of "flexible mechanisms" to implement emissions reductions, leading to the global proliferation of carbon markets, dubious offset schemes, and other capitalist-inspired measures that have largely benefited financial interests without meaningful benefits to the climate. While the original 1992 UN Climate Convention enshrined various principles aimed to address the inequalities among nations, subsequent climate diplomacy has often resembled a demoralizing race to the bottom.

Still, there are some signs for hope. In response to the announced US withdrawal from the Paris framework, an alliance of over 200 US cities and counties announced their intention to uphold the cautious but still significant commitments that the Obama administration had brought to Paris. Internationally, more than 2,500 cities from Oslo to Sydney have submit-

The ability of municipal movements to build support and pressure for broader institutional changes is central to their political importance in a period when social and environmental progress is stalled in many countries.

ted plans to the United Nations to reduce their greenhouse gas emissions, sometimes in defiance of their national governments' far more cautious commitments. Two local popular *consultas* in Columbia moved to reject mineral and oil exploitation within their territories, in one case affiliating their town with the Italian-based "Slow Cities" movement — an outgrowth of the famous Slow Food movement that has helped raise the social and cultural standing of local food producers in Italy and many other countries. A Slow Cities statement of principles suggests that by "working towards sustainability, defending the environment and reducing our excessive ecological footprint," communities are "committing ... to rediscover traditional know-how and to make the most of our resources through recycling and reuse, applying the new technologies."

The ability of such municipal movements to build support and pressure for broader institutional changes is central to their political importance in a period when social and environmental progress is stalled in many countries. Actions initiated from below may also have more staying power than those mandated from above. They are far more likely to be democratically structured and accountable to people who are most affected by the outcomes. They help build relationships among neighbors and strengthen the capacity for self-reliance. They

enable us to see that the institutions that now dominate our lives are far less essential for our daily sustenance than we are often led to believe. And, perhaps most important, such municipal initiatives can challenge regressive measures implemented from above, as well as national policies that favor fossil fuel corporations and allied financial interests.

For the most part, recent municipal initiatives in the US and beyond have evolved in a progressive direction. Over 160 US cities and counties have declared themselves as "sanctuaries" in defiance of the Trump administration's elevated enforcement of US immigration laws — a very important development in light of the future displacements that will result from climate change. Such ongoing political and legal battles over the rights of municipalities against states speak to the radical potential of socially and ecologically progressive measures emerging from below.

Social and environmental justice activists in the US are also challenging the trend of right-wing electoral victories by running and winning bold campaigns for a variety of municipal positions. Perhaps most noteworthy is the successful 2017 campaign of Chokwe Antar Lumumba, who was elected mayor of Jackson, Mississippi, in the heart of the Deep South, with a program focused on human rights, local democracy and neighborhood-based economic and ecological renewal. Lumumba ran as the voice of a movement known as Cooperation Jackson, which takes its inspiration from the Black American tradition and the Global South, including the resistance struggles of enslaved Africans before and after the US Civil War, the Zapatista movement in southern Mexico, and recent popular uprisings around the globe.

Cooperation Jackson has put forward numerous ideas that resonate strongly with the principles of social ecology, including empowered neighborhood assemblies, cooperative economics and a dual-power political strategy. Others working to resist the status quo and build local power are organizing directly democratic neighborhood assemblies from New York City to the Pacific Northwest, and developing a new national network to further advance municipalist strategies, as Eleanor Finley importantly recounted in her essay on "The New Municipal Movements" in *ROAR Magazine's* Issue #6.

VISIONS OF THE FUTURE

Whether local efforts such as these can help usher in a coherent and unified municipalist movement in solidarity with "rebel city" initiatives around the world still remains to be seen. Such a movement will be necessary for local initiatives to scale up and ultimately catalyze the world-scale transformations that are necessary to fend off the looming threat of a complete breakdown in the Earth's climate systems.

Indeed, the projections of climate science continually highlight the difficulty of transforming our societies and economies quickly enough to prevent a descent into a planet-wide climate catastrophe. But science also affirms that the actions we undertake today can mean the difference between a future climate regime that is disruptive and difficult, and one that rapidly descends toward apocalyptic extremes. While we need to be completely realistic about the potentially devastating consequences of continuing climate disruptions, a genuinely transformative movement needs to be rooted in a forward-looking view of an improved quality of life for most people in the world in a future freed from fossil fuel dependence.

Partial measures are far from sufficient, and approaches to renewable energy development that merely replicate capitalist forms may likely turn out to be a dead end. However, the cumulative impact of municipal efforts to challenge entrenched interests and actualize living alternatives — combined with coherent revolutionary visions, organization and strategies toward a radically transformed society — could perhaps be enough to fend off a dystopian future of deprivation and authoritarianism.

Democratically confederated municipalist initiatives remain our best hope to fend off a dystopian future of deprivation and authoritarianism and meaningfully reshape the fate of humanity on this planet.

Democratically confederated municipalist initiatives remain our best hope to meaningfully reshape the fate of humanity on this planet. Perhaps the threat of climate chaos, combined with our deep knowledge of the potential for a more humane and ecologically harmonious future, can indeed help inspire the profound transformations that are necessary for humanity and the Earth to continue to thrive. ★

BRIAN TOKAR



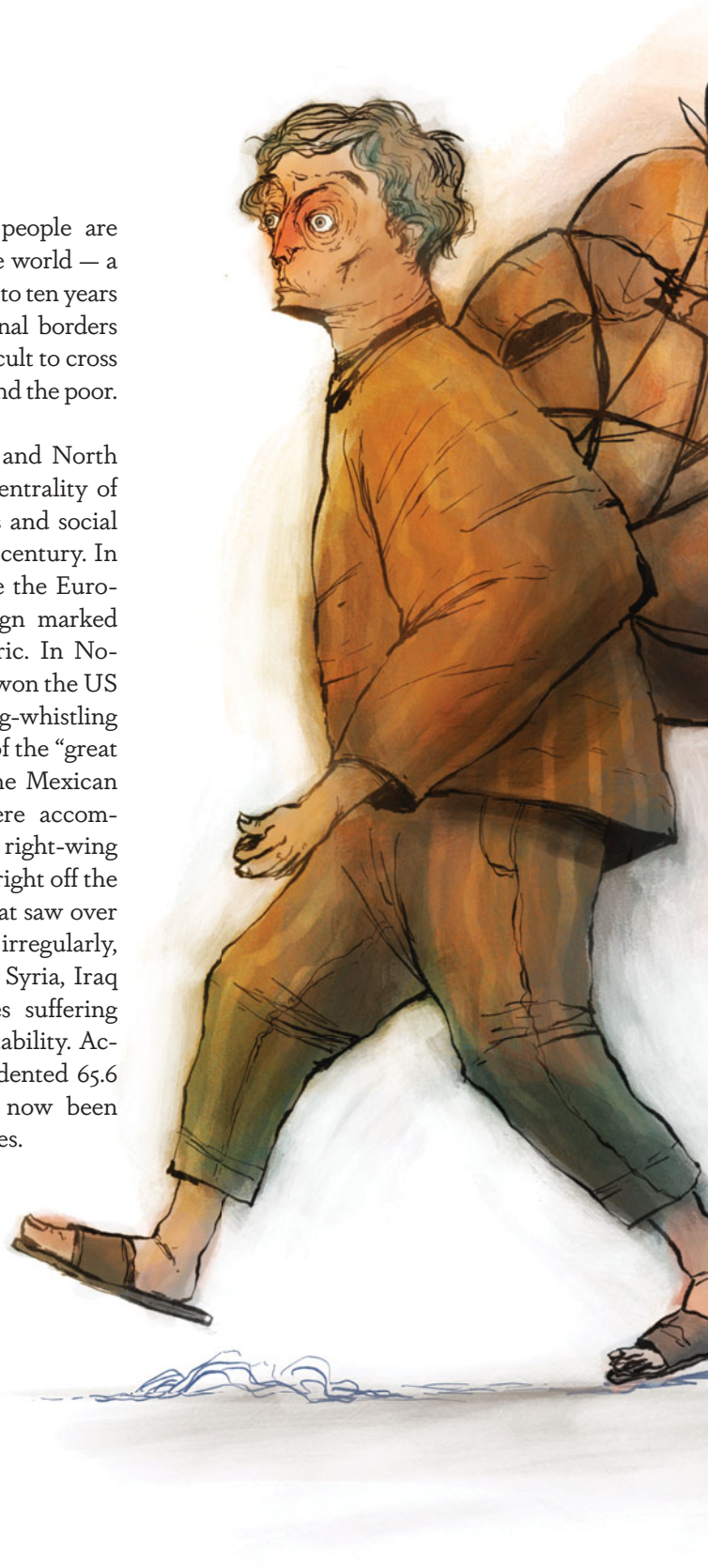
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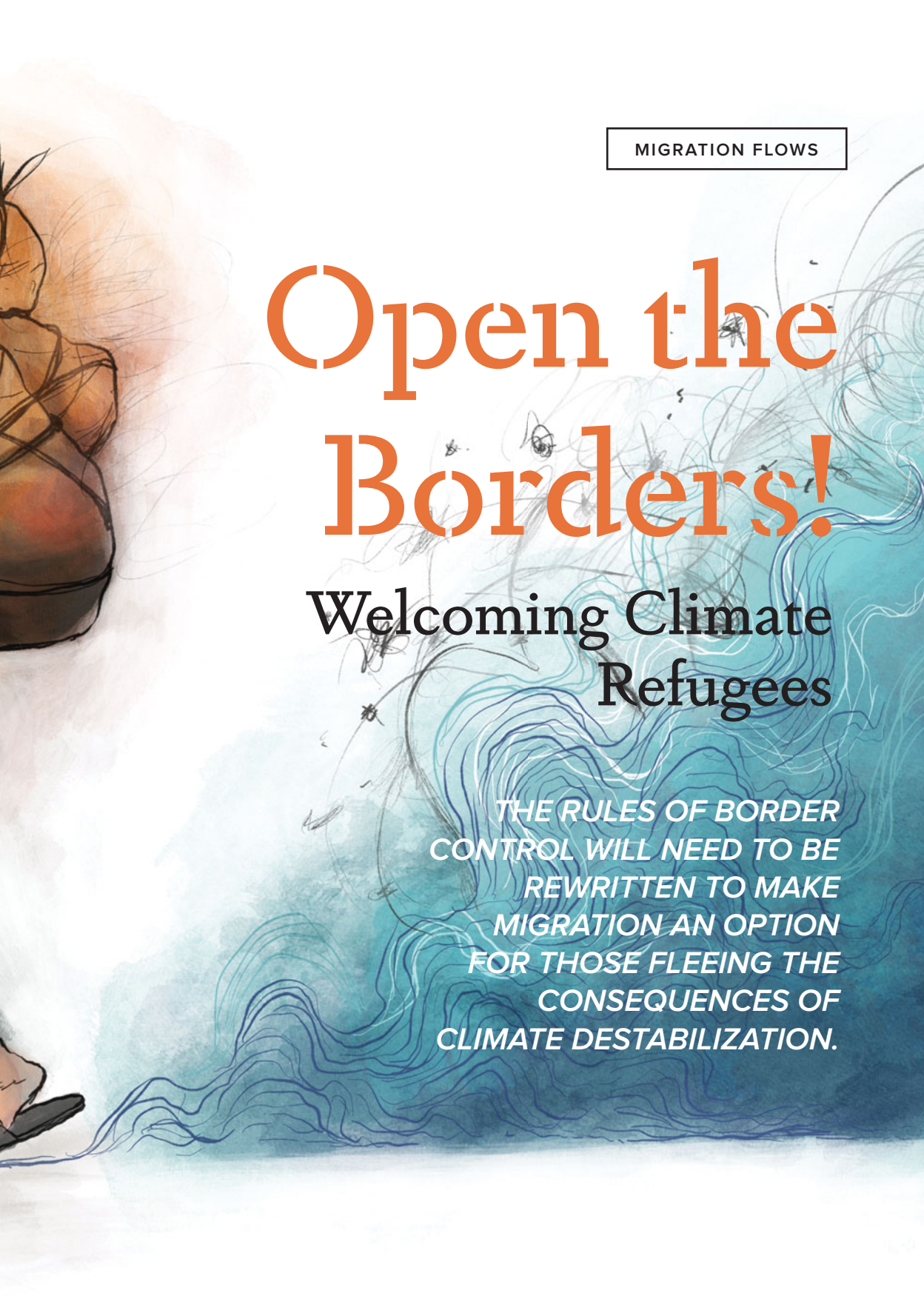
Every minute, twenty-five people are displaced somewhere in the world — a fourfold increase compared to ten years ago. At the same time, international borders are becoming more and more difficult to cross for the undesired, the persecuted and the poor.

Recent developments in Europe and North America highlight the growing centrality of migration to the political debates and social struggles of the early twenty-first century. In June 2016, the UK voted to leave the European Union following a campaign marked by fierce anti-immigration rhetoric. In November that year, Donald Trump won the US presidential elections while dog-whistling white supremacists and boasting of the "great wall" he was going to build at the Mexican border. These developments were accompanied by a surge in support for right-wing nationalist parties across Europe, right off the back of a major "refugee crisis" that saw over 2.3 million people enter Europe irregularly, 80 percent of them arriving from Syria, Iraq and Afghanistan — all countries suffering ongoing conflict and political instability. According to UNHCR, an unprecedented 65.6 million people worldwide have now been forcibly displaced from their homes.

April Humble

Illustration by
Kaan Bağcı





Open the Borders!

Welcoming Climate Refugees

THE RULES OF BORDER CONTROL WILL NEED TO BE REWRITTEN TO MAKE MIGRATION AN OPTION FOR THOSE FLEEING THE CONSEQUENCES OF CLIMATE DESTABILIZATION.

One factor that is often left out of these political debates, however, is the role played by climate change as an amplifier of push factors behind human migration everywhere. This is particularly true in areas where political, economic and social forces diminish the capacity for adaptation. Climate change will undermine many countries' ability to support their respective populations, pushing up migration rates across the globe. In a rapidly warming world, the rules of border control clearly need to be rewritten to make migration an option for those fleeing the consequences of climate destabilization in their home countries.

BORDER SECURITY

Following 9/11, a dangerous love affair blossomed between Western leaders and the notion of border security, against the backdrop of a radical escalation in the Global War on Terror. Today, a decade and a half later, the official response to increased global migration flows is entrenching this narrative — of migrants as a threat to Western security, society and culture, and of border security as the only possible answer — in the minds of millions.

In Europe, the recent "refugee crisis" saw the bloc rapidly backtrack on its long-standing pledge to safeguard people fleeing war and persecution worldwide. Barbed wire fences were erected and war ships deployed. In just over a year, security and control had been heightened or reintroduced at more than twenty national borders. The European Union's contentious agreement with Turkey appointed President Erdoğan as the *de facto* gatekeeper of Fortress Europe, while absolving the EU of any responsibility towards the migrants and refugees trying to scale its walls.

This disregard for the rights of refugees is by no means limited to Europe. Between 2012 and 2015, for instance, more than 120,000 Rohingya boarded ships in an attempt to flee religious persecution in Myanmar. Thousands were turned away by neighboring states as they drifted at sea, with no country wanting to claim responsibility for their plight. From those suffering abuse, torture and murder at the hands of border guards at the Turkish-Syrian border or the Indian-Bangladeshi border, to the Australian government putting up posters in the cities of South-East Asia warning migrants that they are not welcome, abuse and oppression of migrant populations is increasing across the globe.

Today, there are over seventy securitized borders in the world — five times as many as 25 years ago. Beside Fortress Europe, militarized border security is becoming increasingly common across North Africa, the Middle East and South Asia. Much of this is part of a broader strategic undertaking by the Western countries to prevent migration flows from reaching their borders. The EU, for instance, has programs of "externalization" — logistically supporting third countries to secure its external borders — from Africa to China to the Caribbean, while Australia has similar programs in Asia and Oceania. The US Army has trained soldiers in border security in over 100 countries, and many leaders in other regions — particularly the Middle East and South Asia — are desperate to get in on the game.

NO WAY OUT

In many parts of the world where social insecurity, political oppression and economic fragility already lace the foundations of society, the disruptive effects of climate change are also starting to take their toll. People's abilities

to survive and prosper are being affected, forcing them to flee their homes and give up on their traditional means of existence. This kind of climate-related migration is rapidly becoming a global phenomenon. From Sub-Saharan Africa to Alaska, from the Andes to the Himalayas, people are already on the move due to changes in temperatures and weather patterns. In 2016, 23 million people were forced to migrate following weather-related natural disasters. That year, the ratio of people fleeing environmental disasters to people fleeing violent conflict was 3:1.

Currently, no international framework exists that is anywhere close to encapsulating all the needs and protecting all the rights of those migrating in a context of climate change. Nor does it look likely that such a framework will be developed any time soon. Taken together, militarized borders and climate change therefore make for a toxic combination, especially in the Global South, where local populations often face the most serious social, economic and political obstacles to climate adaptation.

Taken together, militarized borders and climate change make for a toxic combination, especially in the Global South, where local populations often face the most serious social, economic and political obstacles to climate adaptation.

One striking example of these developments is Pakistan, where droughts, heat waves and floods are becoming an increasingly serious problem. In 2010, a single episode of flash and riverine floods killed 2,000 people and displaced approximately 20 million. Karachi, the country's economic backbone, which receives one million migrants a year in search of a feasible livelihood, is highly vulnerable to rising sea levels and storm surges. If this city is destabilized as a result of climate change, there are fears that there will be profound effects for the entire country, where lagging infrastructure and socio-economic vulnerability greatly limit the options for adaptation.

At the same time, the possibilities for cross-border migration from vulnerable Pakistan are also severely constrained. The India-Pakistan border fence is 1,958 kilometers long, and there are plans to close the entirety of the border by the end of 2018. Iran is currently reinforcing an ineffective old border barrier, and at the highly militarized border with Afghanistan, Pakistan recently launched its first modern bor-





LESVOS ISLAND, GREECE - 29 OCTOBER 2015. SYRIAN REFUGEES ARRIVE FROM TURKEY ON BOAT
NICOLAS ECONOMOU / SHUTTERSTOCK.COM

der management system. As the sixth most populous country in the world, the citizens of Pakistan face growing threats under climate change. Unless governments work to recognize cross-border migration as an essential coping mechanism and bilateral plans are created to ensure that this is a safe option, many in Pakistan will face a pressure cooker scenario with literally no way out.

FEELING THE HEAT

Populations across West and North Africa are already feeling the heat as well. Predictions have suggested that average temperatures in the Sahel could increase by as much as 5 degrees by 2050, with the population expected to grow threefold — from 100 million to a whopping 300 million — within the same timeframe. Already suffering from the political crackdown on the Arab Spring and the rise of extremist groups like ISIS, Boko Haram and Al-Shabab, the region is predicted to suffer huge levels of displacement as a result of climate change-induced desertification and water loss.

The EU's policy of border externalization, meanwhile, is already posing serious challenges to many Sub-Saharan migrants traveling towards the North African countries, hoping to eventually reach European shores. Not only has the Libyan-Italian crossing become the most dangerous in the world — with the odds of dying en route as high as one in 23 — but in response to the EU's demands to stem the flow of migrants, countries such as Libya and Morocco have been rounding up migrants en masse and dumping them in the desert.

Regions where populations are hemmed in by neighboring oppressors will suffer particularly heavily. Take Palestine, for instance, where climate change is believed to cause rising temperatures and water scarcity. Agriculture makes up a large share of economic output, employment and local food security, and is particularly sensitive to temperature increases and droughts. This will have huge knock-on effects on the Palestinian people, whose socio-economic resilience has already been battered by decades of occupation and conflict. Due to the severe restrictions on popular movement in the area, seasonal migration is no longer a viable coping mechanism.

All of this comes at a high social and economic cost for vulnerable populations. The benefits of cross-border migration as a coping strategy have historically been very important. Moving across borders allows families to send one or two members abroad to earn money elsewhere and send it back in remittances, meaning the rest of the family can stay put. This strongly mitigates crisis points, preventing the need for entire families and communities to leave hearth and home behind. Remittances from migrant workers amount to three times the amount of global aid and generally act as a significant poverty alleviator worldwide. Limiting this capacity in favor of an emphasis on adaptation *in situ* is likely to further aggravate existing pressures on many fragile countries.

REWRITING THE RULES

Clearly, then, political debates over migration and border security can no longer take place in isolation from broader considerations of climate justice. Climate change will have the greatest impact on some of the world's most vulnerable populations, gravely affecting their ability to survive and prosper. With this in mind, we should be fighting for safe cross-border passage as a serious coping mechanism for those living in areas where the capacity for adaptation is particularly low.

Social movements will have an important role to play in this respect. Climate-induced migration has only become an international issue of concern in recent years because of the persistent work of social justice activists and non-governmental groups. Movements mobilizing around refugee rights, border security and climate justice will now need to join forces and exert strong pressure from below to force world leaders to open borders, rather than closing them. Of course, taking radical steps to limit global carbon emissions will be the single most important contribution to easing the pressures on vulnerable populations, but we must be clear that there *will* be further increases in international migration, and that our struggles must be geared towards enabling orderly resettlement wherever necessary.

Political debates over migration and border security can no longer take place in isolation from broader considerations of climate justice.

The way the term "refugee crisis" has been used in recent years implies a crisis for Europe and the West. The real crisis, however, is faced by those who have been forced to leave everything they have ever known. Climate change is the ultimate game changer in this respect. In extreme times, the rules of the game — including the rules of international migration — will need to be rewritten. This cannot wait for a few years or decades down the line. By then, some of the most dangerous forces of climate destabilization will already have been locked in. We must act on this today, lest we lose millions of fellow human beings to the global threat of climate change, and to the narrow-minded and xenophobic views of world leaders on who has the right to move and who doesn't. ★

APRIL HUMBLE



April Humble *is Director of Borderlands, a charity that works with refugees and asylum seekers in Bristol. Her background spans climate change and conflict resolution, and she has a particular interest in global border security developments.*

CLIMATE CRISIS AND THE STATE OF DISARRAY



DISASTER RESPONSE

COULD THE REVOLUTIONARY INTERCOMMUNALISM OF THE BLACK PANTHERS PROVIDE AN ANSWER TO THE STATE'S PURPOSEFUL NEGLECT OF VULNERABLE COMMUNITIES DURING NATURAL DISASTERS?

William C. Anderson

Illustration by **Istvan David**



We are indebted to the Earth. Our gracious host has provided us with more than enough resources to live, grow and prosper over time. But throughout history, and especially in the modern capitalist era, some have let their desire for more become a perilous dedication to conquest. The urge to make other humans, wildlife and all parts of nature submit to the will of markets, nations and empires is the rule of the day. Today, anything associated with nature or a true respect for it is regarded as "soft." That which is not vulturous like the destructive economics of the reigning system is steamrolled to pave the road to unhinged expansion.

This logic of expansion and conquest undoubtedly changes the relationship between humans and their environment. In this context, the "debate" over climate change actually becomes a matter of human survival. Those who entertain climate change as a question at all have already, maybe unknowingly, chosen a side. The fact is that climate change will create more refugees and forced human migrations; it will lead to the murder of environmental activists around the world and start new resources wars; it will spread disease and destabilize everything in its path — and more. Unless capitalism's unquenchable thirst for natural resources and the fossil fuel combustion that powers it is abandoned, the Earth will be forced to do away with humans cancerously plundering the carbon energy it has stored over millions of years of natural history.

What is most unfortunate is that capitalism, which has multi-layered discriminations encoded within it — racism, sexism, classism, and so on — affects how thoroughly people are capable of bracing for the damages wrought by climate change. Though nature is indiscriminate in its wrath, the sustained ability to protect oneself from rising temperatures and natural disasters is a privilege not all can afford. Those who are already harmed under the pitiless whims of capital are doubly hurt by the lack of protection afforded to them for life in an increasingly turbulent environment. The Global South is much more likely to feel the brunt of climate change, despite contributing much less to causing it. But even in the world's wealthiest nations, the poor and working classes are much more vulnerable to ecological devastation.

If the people who understand the gravity of the situation want this state of affairs to cease, then the system of capitalism and the egregious consumption of the so-called First World itself must cease. That which puts all of us at risk cannot be tolerated. The vast satisfactions in wealth hoarded by a few does not outweigh the needs of the many suffering the consequences every day, as the Earth deals with malignant human behavior. The systemic drive towards excess that is pushing the planet's carrying capacity to the brink must be brought to a halt throughout the world, but especially in the empire that exemplifies excess best: the United States of America.

THE MYTH OF "THE NANNY STATE"

Ever since Donald Trump became president, crisis and disarray have been regular in an extraordinary sense. Not that the United States hasn't always been this way; it has been for many of those oppressed within this society. But the dramatic events unfolding today have been very confronting for those who are only now realizing that progress — or the things that represent it symbolically — can be done away with overnight.

In the midst of an onslaught of draconian far-right legislation, the liberal establishment has

failed to muster a convincing rebuff. This is due in part to complicity in the shift towards the right, and in part due to a more general crisis of confidence within liberalism. But what is also failing today is the state itself. At a time when environmental, social and economic crises are running out of control amid authoritarian overreach, the state seems to be in a moment of purposeful neglect and disarray. This is leading people to take the response to the confluence of crises into their own hands, raising the question of the state's *raison d'être* to begin with.

When former White House chief strategist Steve Bannon spoke at the Conservative Political Action Conference (CPAC), he said that President Trump's choices for his cabinet would be aimed at "deconstruction of the administrative state." Bannon suggested that the primary goal should be to limit the regulatory agencies and bureaucratic entities getting in the way of the administration's self-styled economic nationalism. "The way the progressive left runs," Bannon went on to say, "is if they can't get it passed, they're just going to put in some sort of regulation in an agency. That's all going to be deconstructed and I think that's why this regulatory thing is so important." Years before this, in 2013, he had already told a writer for the *Daily Beast* that "I'm a Leninist ... Lenin wanted to destroy the state, and that's my goal, too. I want to bring everything crashing down, and destroy all of today's establishment.

Without overemphasizing the irony and risible misleadingness of the latter self-comparison, Bannon does raise a key question for the far right: what's the use in a state? While such a question could potentially be put to progressive use in some hands, it is definitely dangerous in these. For the right, the question of the state's usefulness is answered by the assertion of dominance and the infliction of violence — something that is clearly distressing for those of us resisting oppression. But at the same time, right-wing propaganda and talking points also depict the state as a "nanny state," or an overprotective manifestation of liberal charity. Clearly, this characterization is as stale as it is untrue. The very idea that liberalism itself is charitable is a blatant falsification, yet the far right continues to disseminate this myth in its unending desire to maximize the state's fascistic potential while depriving it of its limited welfare functions.

> ***"Though nature is indiscriminate in its wrath, the sustained ability to protect oneself from rising temperatures and natural disasters is a privilege not all can afford.***

Austerity measures — something the world has become all too familiar with in recent years — provide us with the brutal confirmation that we never actually needed to dispel the far right's propagandistic falsehoods. As governments around the world cut back on services, regulations and agencies that are meant to benefit social welfare and the public good, the trope of overzealous liberal government is shown to be untrue. Austerity threatens to undermine the very things that are supposed to make societies peaceable. But

Climate change on your doorstep: extreme weather events in 2016

CLIMATE CHANGE-INDUCED EXTREME WEATHER EVENTS

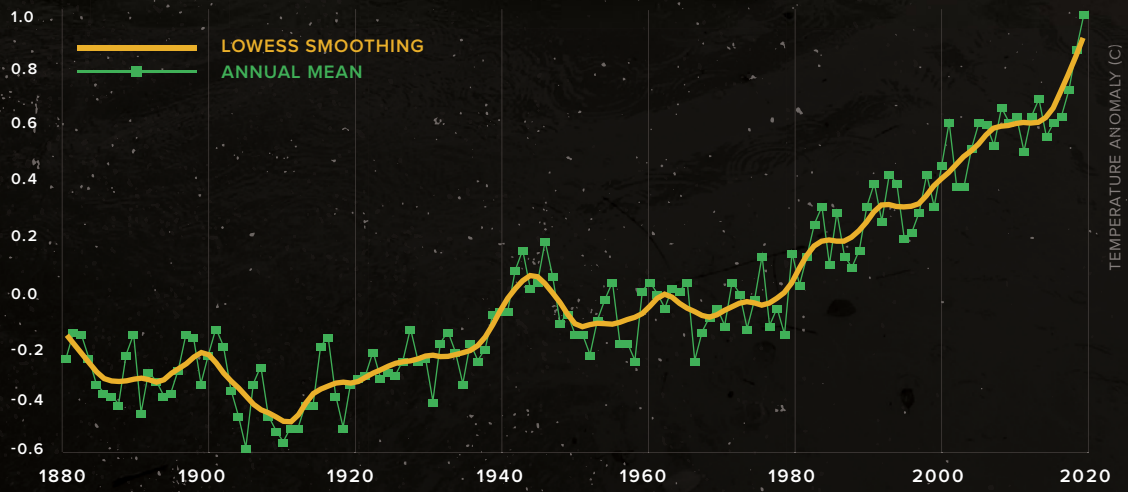
- Global avg. temperature record high
- Extreme heat in the Arctic
- Severity of 2015-2016 El Niño
- Duration of coral bleaching in Great Barrier Reef
- Risk of wildfires in western US
- Marine heat waves off Alaska and Australia
- Extreme rainfall in China
- South Africa's drought
- Extreme heat wave over Asia

- could not have happened without human-caused warming of the climate through increases in greenhouse gases

"For years scientists have known humans are changing the risk of some extremes. But finding multiple extreme events that weren't even possible without human influence makes clear that we're experiencing new weather, because we've made a new climate."

– Jeff Rosenfeld, editor-in-chief of Bulletin of the American Meteorological Society (BAMS).

GLOBAL MEAN TEMPERATURES BASED ON LAND AND OCEAN DATA



SOURCE: NASA / GODDARD INSTITUTE FOR SPACE STUDIES

as consistently seems to happen in a world dominated by capitalism, those who are most vulnerable bear the brunt.

DISMANTLING PROGRESS AND PROTECTION

In 2016, Oxfam announced that world's 62 richest billionaires held as much wealth as the poorest half of the world's population. In 2017, this number decreased significantly to just eight people because new information came to light showing that poverty in China and India are much worse than previously thought, widening the gap between the ultra-wealthy elite and the bottom 50 percent. While this information is certainly beyond troubling, capitalism largely continues its path of destruction without being disturbed itself.

> ***"The example of the Environmental Protection Agency under Trump is one of many hinting at an increasingly restructured state, in which right-wing corporate forces that once fought regulation now become the regulator themselves.***

A slew of hurricanes hitting the Caribbean in 2017 made the world pause to consider the dangers of climate chaos. Many of the conversations that took place as a result of the back-to-back destruction wrought by hurricanes Irma, Jose and Maria focused on the threat of a disturbed environment. Under President Trump, these threats are only further exacerbated. As someone who campaigned on rejuvenating the coal industry and who has actively worked to transform climate denialist sentiments into government policy, Trump is one of the worst presidents anyone could hope for at a time of pressing climate disaster. With regard to the aforementioned "deconstruction" of the regulatory state that Banon spoke of, Trump accomplished major strides at the Environmental Protection Agency (EPA). Under the regressive guidance of Scott Pruitt, a long-time fossil fuel defender, the EPA has seen absurd government moves to destabilize the very purposes of the agency itself in favor of corporate interests.

Pruitt built his career off of suing the EPA as attorney general for the state of Oklahoma. Under Trump, he can now secure his ultimate favor to corporate interests by dismantling the state agency altogether. Everything is up for grabs and the agency has become increasingly secretive about its agenda. The New York Times reported complaints of career EPA employees working under Pruitt, explaining that "they no longer can count on easy access to the floor where his office is," as well as doors being "frequently locked." It has even been said that "employees have to have an escort to gain entrance" to Mr. Pruitt's quarters, as well as some being told not bring cell phones or take notes in meetings. The *Washington Post* recently reported that the EPA spent almost $25,000 to soundproof his work area. For a state agency tasked with protecting the environment, the actions being carried out sound more in line with that of federal law enforcement or intelligence at the FBI or CIA.

The example of Pruitt is one of many hinting at an increasingly restructured state, in which right-wing corporate forces that once fought regulation now become the regulator themselves, showing how the will of capital will always fulfill itself in this system. At the same time, as the trifecta of terrible storms hit the Caribbean and the Southern US coastline, the Federal Emergency Management Agency (FEMA) displayed a similar lack of social concern. In response to the lackluster response of the authorities, local communities were left to fend for themselves, with only a few celebrity figures tasking themselves with taking action. At a very emotional press conference, Mayor Carmen Cruz of San Juan compared the neglect taking place to genocide and shed tears demanding more help for US citizens in Puerto Rico: "we are dying here. And I cannot fathom the thought that the greatest nation in the world cannot figure out logistics for a small island of 100 miles by 35 miles long."

CITIZENSHIP, EXPECTATION AND FAILURE

The emphasis on Puerto Ricans during the aftermath of Hurricane Maria and the other storms often gives special attention to their Americanness. Despite the fact that the entire Caribbean was hit, the question is why US citizens would be neglected in this way. The logic of American exceptionalism should render everyone within the nation's borders and territories — or colonies — special due to their citizenship within the bounds of empire. But as Zoé Samudzi and I argued in our essay for *ROAR Magazine*, "The Anarchism Of Blackness," some US citizens, particularly those of us who are Black, are actually considered extra-state entities.

Though not all Puerto Ricans are Black, from Flint to San Juan we have seen that when certain geographies are associated with Blackness or the non-white Other, their citizenship can always be called into question. As Zoé and I wrote:

> *Due to this extra-state location, Blackness is, in so many ways, anarchistic. African-Americans, as an ethno-social identity comprised of descendants from enslaved Africans, have innovated new cultures and social organizations much like anarchism would require us to do outside of state structures.*

Now, as Puerto Ricans have worked excruciatingly hard with the assistance of other people throughout the US to pick up the slack of the Trump administration, we can see the emerging contours of an anarchistic response brought about by the climate crisis. In the shadow of Hurricane Katrina and Flint, we have had it proven to us one too many times that the white supremacist state does not care about us. The

consistent need to crowdfund and organize to fill in the gaps of the lackluster response of federal agencies for the richest nation in the world must call into question the very purposes of the state itself.

Trump's proposed military budget of $700 billion is more than enough to end poverty in the US, make college free, or provide everyone with universal health care — let alone quickly fix the problems in places like Flint, Puerto Rico, and so on. Instead, people are left to fend for themselves, begging the state to carry out the functions it is supposedly obliged to carry out while depending on celebrities and liberal oligarchs to give like the rest of us. This is clearly absurd, given the endless wealth of the state and the gap between the rich and the poor.

> ***In the shadow of Hurricane Katrina and Flint, we have had it proven to us one too many times that the white supremacist state does not care about us.***

The expectation that lower- and middle-income people will provide aid during crises with greater passion than the super-rich and state agencies, when we do not have nearly as much money as either of them, is absolutely and utterly ridiculous. But it is this utter ridiculousness that is the quintessence of contemporary capitalism. Though capital is unequally distributed, the burden of fixing



BURNING STRUCTURE IN BLACK FOREST, COLORADO, JUNE 12, 2013. PHOTO BY MASTER SGT. CHRISTOPHER DEWITT, US AIR FORCE.

whatever the problems of the day may be is all ours, while the elite shy away from ever having to pay as large a price as the cost of being poor in a capitalist society.

One of the most despicable examples of these injustices played out in California, where raging wildfires killed dozens of people in 2017, while inmates were being paid $2.00 per hour to risk their lives fighting the fires. Their confinement makes their labor hyper-exploitable and again flattens the burden of problems linked to natural disasters, while the elite who caused the problems remain unfazed in their chase to destroy the planet for profit. In Texas, inmates raised about $44,000 to aid those affected by Hurricanes Katrina and Rita. After Hurricane Harvey, inmates remembered previous fundraising efforts and requested officials to restart a program that allows them to donate their commissary for relief purposes. After just one month, 6,663 inmates had donated $53,863 for Hurricane Harvey relief from the usually very *small* commissary accounts that they maintain (often $5.00 or less depending on the person).

PICKING UP WHERE THE STATE FALLS THROUGH

None of this is new. The Black Panthers focused much of their work around meeting the needs of the Black community that the capitalist state and market had failed to fulfill. Projects like the Free Breakfast Program and ambulance services give credence to the extensive history of this type of mutual aid. It was the Panthers who exposed the extensive sickle cell anemia epidemic in the Black community by carrying out the work that the state should have done. The concept of "revolutionary intercommunalism," theorized by Black Panther leader Huey P. Newton, helped develop a strategy for structured community service programs also known as "survival programs." These programs were meant to address the lack of helpful institutions and services in Black communities serving the needs of the people. The current situation demands proper respect given to its purpose. Intercommunalism focuses on and prioritizes Black self-determination outside of the state's failures to adequately look after the needs of the Black community. The survival of underserved people is understood to be a part of the necessary politics of transformative change. Aside from the glitz of revolution that fuels popular depiction in the media, politics and culture, our current pre-revolutionary situation requires the everyday survival of those of us who would do the revolting in the first place. Intercommunalism pays respects to revolution as a process, and not merely an overnight reaction.

Across communities Black and all colors, we see a persistent need to address whatever shortcomings white supremacy delves out to us. It is not necessarily new for communities in the US dealing with white supremacy to support each other and build resistance from within. Starting our own services and building up each other is an everyday revolutionary politics of survival. However, what can and often does happen is that maintaining our own institutions within the bounds of capitalism becomes the objective when ending capitalism should be a necessary outcome. More than simply reacting to capitalism in anarchistic ways, we should be proactively working to overcome it by making our very models of resistance anti-capitalist. Depending on the likes of sympathetic capitalists and liberal elites is counter-productive in this respect. Instead of building ways to consistently respond to disaster, we must be proactive in ending the crisis of capitalism rather than solely attempting to counter it one day at a time.

A proactive pre-revolutionary situation will raise the consciousness of people to realize that they are already carrying out the radical politics they are often told to despise. Ahistorical liberal reimaginings of the past make tragedy into a necessary stepping stone for an empire that is learning at the expense of the oppressed. Real resistance positions people to build movements that undo the violence that oppression inflicts. We are not in need of excuses; we are in need of a better world. If we want that better world, we have to align our politics with a radical imagination, with sustainable everyday resistance and innovative strategy.

It is not new for communities in the US dealing with white supremacy to support each other and build resistance from within. Starting our own services and building up each other is an everyday revolutionary politics of survival.

The task of making the planet a better place is a great task, but it is the only choice we have — lest we allow capitalism to destroy the carrying capacity of the one we currently inhabit. We can no longer afford to let crisis keep us entangled in this current state of disarray. Instead, we should charge our suffering to a system that must pay with its unacceptable existence. ★

Over 150 people worldwide have been murdered this year while defending the environment. This piece is in loving memory of those who have died and will die doing so. Thank you for all that you did for us.

WILLIAM C. ANDERSON



William C. Anderson *is a freelance writer. His work has been published by The Guardian, MTV and Pitchfork among others. Many of his writings can be found at Truthout or at the Praxis Center for Kalamazoo College, where he is a contributing editor covering race, class and immigration.*

ECOLOGICAL AGRICULTURE



SEED FREEDOM AND THE FUTURE OF FARMING



IN AN ERA OF CLIMATE CHANGE, REJUVENATING AND REGENERATING THE SOIL THROUGH ECOLOGICAL PROCESSES HAS BECOME A SURVIVAL IMPERATIVE FOR THE HUMAN SPECIES.

An interview with **Vandana Shiva**

Illustration by **Luis Alves**

Vandana Shiva is a world-renowned Indian scholar, environmental activist and author of over twenty books. She has been involved in grassroots movements against genetic engineering across the world, and has successfully led multiple campaigns against various multinationals and international institutions seeking to monopolize and privatize indigenous seeds, traditional knowledge and natural resources. ROAR editor Joris Leverink spoke with Vandana Shiva about the role of industrial agriculture in climate change, the challenges faced by farmers in the Global South and how to avoid the imminent environmental disaster threatening our existence on this planet.

ROAR: *For many years you have actively resisted, both in your writing and in your activism, the global transformation of agriculture from an agro-ecological paradigm to an industrial paradigm. In your latest book* Who Really Feeds the World? *(Zed Books, 2016) you also point out that "the industrial paradigm of agriculture is causing climate change." How should we conceptualize the difference between the two paradigms, and what is the role of the latter in driving climate change?*

Vandana Shiva: There are two distinct agricultural paradigms. The first is industrial agriculture, which has been designed and developed by the "poison cartel" of chemical companies and factories that emerged during World War II and that was in control of the production of chemicals used in explosives, as well as the mass extermination of human beings. After the war, they repurposed these very same chemicals as agrochemicals — pesticides and fertilizers — and they convinced us that we can't have food without these poisons. The second paradigm is the agro-ecological system that evolved over 10,000 years and works together with nature according to ecological principles.

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There are two alternative futures of food and farming. One leads to a dead end: a lifeless, poisoned planet as a result of chemical monocultures. The other leads to the rejuvenation of the planet through a restoration of biodiversity, soil, water and small farms that produce diverse, healthy, fresh, ecological food for all.

There are two alternative futures of food and farming at the conclusion of each paradigm. One leads to a dead end: a lifeless, poisoned planet as a result of chemical monocultures with farmers committing suicide to escape their debt-induced misery, children dying due to lack of food and people suffering of chronic diseases spreading through nutritionally empty, toxic commodities sold as food while climate havoc wipes out human life on earth. The second paradigm leads to the rejuvenation of the planet through a restoration of biodiversity, soil, water and small farms that produce diverse, healthy, fresh, ecological food for all.

Industrial globalized agriculture is one of the single biggest contributors to climate change. It contributes around 24 percent of the three major greenhouse gases: carbon dioxide (CO_2) from the use of fossil fuels, nitrogen oxide (N_2O) from the use of chemical fertilizers, and methane (CH_4) from factory farming. According to the Intergovernmental Panel on Climate Change (IPCC), atmospheric concentration of CO_2 has increased from a pre-industrial concentration of about 280 parts per million to 403.3 parts per million in 2016 as a result of human activities. When the level of CO_2 was this high 3.5 million years ago, global temperatures were 2-3 degrees warmer and the sea level was

10-20 meters higher. The global atmospheric concentration of methane has increased from pre-industrial concentration of 715 parts per billion to 1,774 parts per billion in 2005. The global atmospheric concentration of nitrogen oxide — largely due to use of chemical fertilizers in agriculture — increased from about 270 parts per billion to 319 parts per billion in 2005.

The extraction of fossil fuels (dead carbon) from the Earth, burning it and releasing uncontrollable emissions into the atmosphere leads to the rupture of the carbon cycle and a destabilization of climate systems. To capture more living carbon from the atmosphere, we need to intensify our farms and forests biologically — in terms of both biodiversity and biomass. The more biodiversity and biomass there is, the more the plants capture atmospheric carbon and nitrogen, reducing both emissions and the stocks of pollutants in the air. Carbon is returned to the soil through plants. That is why the connection between biodiversity organic farming and climate change is an intimate connection.

You have said that "the future lies in the soil." What do you mean by this? And what, in your view, are the main lessons we can draw from indigenous knowledge and practices in agriculture, in terms of confronting the ecological crises we are facing today?

We are soil. We are earth. We are made of the same five elements — earth, water, fire, air and space — that constitute the universe. What we do to soil, we do to ourselves. And it is not a coincidence that the words "humus" and "humans" have the same etymological root. All indigenous cultures recognized that we are one with the Earth, and taking care of the soil is our highest duty. As an ancient *veda* says: "In this handful of soil lies your future. Take care of it, it will take care of you. Destroy it, it will destroy you."

This ecological truth is forgotten in the dominant paradigm of industrial agriculture, which operates on the false premise that we are separate and independent of the Earth and which defines soil as dead matter. If soil is dead to begin with, human action cannot destroy its life, it can only "improve" the soil with chemical fertilizers. And if we are masters and conquerors of the soil, we determine the fate of the soil — soil cannot determine our fate.

History, however, is witness to the fact that the fate of societies and civilizations is intimately connected to how we treat the soil. We have a choice how we relate to the soil, through the Law of Return or through the Law of Exploitation and Extraction. The Law of Return, of giving back, has ensured that societies create and maintain fertile soil which can support civilizations for over thousands of years. The Law of Exploitation, of tak-

ing without giving back, has led to the collapse of civilizations. Contemporary societies across the world stand on the verge of collapse as soils are eroded, degraded, poisoned, buried under concrete and deprived of their life.

Industrial agriculture, based on a mechanistic paradigm and the use of fossil fuels has created ignorance and blindness to the living processes that create a living soil. Instead of focusing on the soil-food web, it has been obsessed with external inputs of chemical fertilizers and mechanization, creating the imperative for monocultures — biology and life have been replaced with chemistry. By exposing the soil to the elements, monocultures expose it to erosion by wind and water. Since organic matter creates soil aggregates and serves as binding material, those soils depleted of organic matter and artificially enriched with chemical fertilizers are most easily eroded.

Degraded and dead soils, soils without organic matter, soils without soil organisms, soils with no water-holding capacity create famines and food crises — they do not create food security. This is especially true in times of climate change. Not only is industrial agriculture responsible for almost a quarter of the greenhouse gases contributing to climate change, it is also more vulnerable to it. Soils rich with organic matter are more resilient to drought and climate extremes. And increasing organic matter production through biodiversity intensive systems is the most effective way to get the carbon dioxide out of the atmosphere, into the plants, and then into the soil through the Law of Return.

Soil, not oil, holds the future for humanity. The oil-based, fossil-fuel-intensive, chemical-intensive industrial agriculture has unleashed ecological and social processes that are killing the soil, and hence putting our future at risk.

Clearly there is a need to take on the immense power of the major agricultural and agrochemical corporations, which in turn receive significant backing from some of the world's most powerful states. The struggle of small-scale farmers against multinational companies like Monsanto looks like a typical case of David vs. Goliath. Where do you see this highly asymmetrical struggle going? Where do you find hope? Do you see any opportunities emerging for society to take back control over its own food production, in the face of this vast concentration of agricultural capital?

The poison cartel, which through a series of mergers has been reduced to a cartel of three poison makers — Monsanto Bayer, Dow Dupont and Syngenta ChemChina — developed the chemicals used by the Nazis in their extermination camps. After the war, these very same chemicals that were once used to kill humans were now repurposed as pesticides to be used in industrial agriculture. They then tried to take control of our seeds through genetic engineering and patenting.

> “
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> ***There is a way to reclaim our seeds: through seed freedom, where the control of seeds lies with farmers, instead of a system that views seeds as corporate intellectual property***

But there is a way to reclaim our seeds: through seed freedom, where the control of seeds lies with farmers, instead of a system that views seeds as corporate intellectual property. Every place and every plate can be the site of a revolution against the poison cartel, which is responsible for a century of ecocide and genocide. It is time to sow the seeds to make peace with the earth, and reclaim our freedoms. *Satyagraha*, "the force of truth", or nonviolent civil resistance as promoted by Mahatma Gandhi, is more important than ever in our "post-truth" age. Satyagraha was, and has always been, about awakening our conscience, our inner power, to resist external, brute force. It is an autopoietic response to an externally imposed cruel and unjust system. As Gandhi said, "Satyagraha is a 'No' that stems from our highest conscience."

Gandhi's 1930 Salt Satyagraha inspired Navdanya's contemporary "Seed Satyagraha" and the Seed Freedom movement. Since 1987, when I first heard corporations talk of owning seeds through intellectual property rights, my conscience did not accept it. I made a lifetime commitment to saving seeds, and not to co-operate with the intellectual property rights regime that makes seed-saving and seed exchange a crime.

Bija Satyagraha, or the Seed Satyagraha, is a people's movement for the Resurgence of the Real Seed, of the intelligence of farmers to be breeders and to coevolve with the intelligence of the seed towards diversity, resilience and quality. It is a movement that springs from the higher laws of our being members of the Earth Community, Vasudhaiva Kutumbkam, from the higher laws of our duty to care, protect, conserve, share. The Bija Satyagraha pledge that our farmers take states the following:

Navdanya

Navdanya is a women-centered grassroots movement in India that was founded in 1987 by Dr. Vandana Shiva to promote peace and harmony, justice and sustainability. It focuses on the food security of small-scale farmers and the preservation of India's biodiversity.

In the battle against multinational corporations Navdanya has set up over a hundred seed banks and trained hundreds of thousands of small-scale farmers to convert to organic farming.

Navdanya's vision is that in order to protect our ecological environment as well as the communities that rely upon it, it is of crucial importance to protect the sovereignty of our seeds, food and water and not let these be patented or monopolized by multinational corporations.

The organization's core mission is to meet people's needs while protecting the earth, defending ecological and intellectual heritage and strengthen livelihood and food security.



We have received these seeds from nature and our ancestors. It is our duty to future generations to hand them over in the richness of diversity and integrity in which we received them. Therefore we will not obey any law, or adopt any technology that interferes with our higher duties to the Earth and the Future Generations. We will continue to save and share our seeds.

Over four-and-a-half decades I have participated in many Satyagrahas, and worked for real freedom — the freedom of nature, and of the last person in society. My commitment to our common freedoms grows deeper with time. The Planetary Satyagraha we need today is for each of us to break free of the prisons in our minds created by the 1 percent through constructs and illusions, while we unleash our intelligence and latent powers to begin the Resurgence of the Real, or rethinking our real relations with the Earth and with each other.

Today's non-cooperation movement begins with not subscribing to the fictions and falsehoods through which we are colonized, and not cooperating with the structures of violence and domination built through these fictions to uphold the structures of extraction and exploitation. Breaking free of the 1 percent is the Satyagraha of our times. It is a Satyagraha to stay alive and celebrate the real. To live free according to the higher laws of Gaia, and the higher laws of our humanity and our Dharma.

You often point to the relation between the patenting of seeds — turning them into commodities that are subject to private property rights — and the indebtedness of local farmers, which in India alone has led to the suicides of over 300,000 people. Could you perhaps say a few words on the impact that the introduction of capitalist rationalities has had on food production in the Global South, and what some of the social consequences have been?

India is a land rich in biodiversity. For over 10,000 years Indian farmers have used their brilliance and indigenous knowledge to domesticate and evolve thousands of crops, including 200,000 rice varieties, 1,500 wheat varieties, 1,500 banana and mango varieties, hundreds of species of dals and oilseeds, diverse millets and pseudo-cereals, vegetables and spices of every kind.

Corporations breed seeds that respond to their chemicals, which need monocultures to work optimally and cost-effectively, which in turn are vulnerable to the consequences of climate change.

This brilliance and diversity in breeding was abruptly stopped when the Green Revolution was imposed on us in the 1960s by agrochemical companies and factories that in the wake of World War II were desperately looking for new markets for synthetic fertilizers made in the explosives factories of the war. In a similar vein to the colonization process of the past, our intelligence in seed-breeding and agriculture was denied, our seeds were called "primitive" and we were displaced. A mechanical "intel-

ligence" of industrial breeding for uniformity, for external inputs was imposed. Instead of continuing to evolve varieties of diverse species, our agriculture and our diet was reduced to rice and wheat.

Corporations breed seeds that respond to their chemicals. Chemicals need monocultures to work optimally and cost-effectively, which in turn are vulnerable to the consequences of climate change to which industrial farming makes a significant contribution.

Genetic engineering of seeds was started by the poison cartel because they saw an opportunity to collect rents from farmers by imposing patents on the use of seeds in free trade agreements. As one Monsanto representative said, "We were the patient, diagnostician, physician all in one." And the problem they diagnosed was that farmers save seeds. The case of Monsanto and its genetically modified cotton seed called "Bt cotton" provides a clear example. In order to force farmers to use Bt cotton seeds, it established a monopoly that prevented farmers access to alternative cotton seeds. By now, 99 percent of the cotton planted is Bt cotton. Meanwhile, Monsanto has raised the price of seeds by nearly 80,000 percent, forcing farmers to put themselves in extreme debt simply to buy the most basic element to grow their crops.

Bt cotton — sold in India under the name Bollgard — was presented as pest-resistant, eliminating the need for farmers to use pesticides. But as pests have become resistant to Bt cotton over time, the use of pesticides in certain Indian states have increased up to thirteenfold after the introduction of the genetically modified crop. As a result, hundreds of farmers have died due to pesticide poisoning and many thousands more have committed suicide as a result of the debt-trap they landed in.

Farmers' seed sovereignty is at the heart of solutions to the epidemic of farmer suicides. Only when farmers have access to their own seeds will they be free of debt. And only through seed sovereignty can farmers' incomes be increased. Organic cotton farmers earn more by avoiding costly seeds and chemicals. Organic cotton is the future.

People living in the Global South — especially those whose livelihoods depend directly on their surrounding natural environments — are disproportionally affected by the effects of climate change. In your view, what immediate action should be taken in order to minimize the threat that climate change poses to these vulnerable populations, considering that the governments of some of the world's richest countries do not appear to be very interested in deviating from business as usual?

Tragically, it is those who have contributed the least to greenhouse gas emissions who are suffering the most because of climate chaos — communities in the high Himalayas that have lost their water resources as glaciers melt and disappear, peasants in the Ganges basin whose crops have failed because of droughts or floods, coastal and island communities that face new threats of sea-level rise and intensified cyclones.

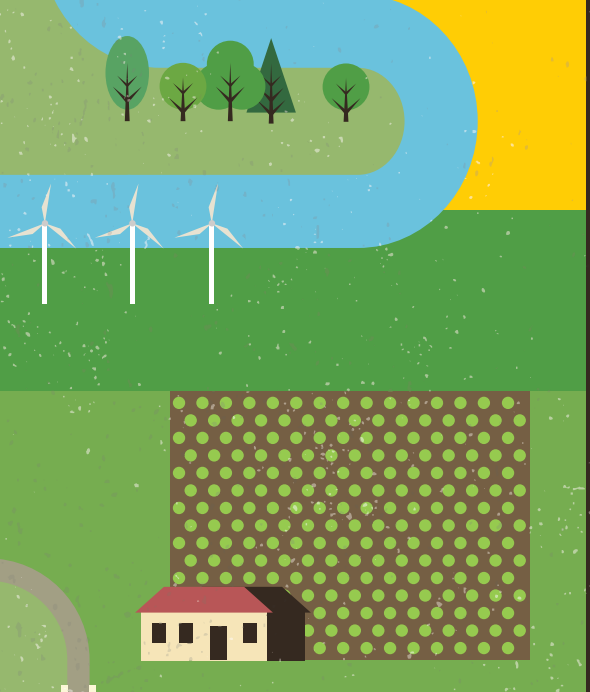
Climate change, extreme natural events and climate disasters are becoming ever more frequent reminders that we are a part of the Earth, not apart from her. Every act of violence that disrupts ecological systems also threatens our lives. As citizens of the Earth, each of us can act to protect her. Industrial agriculture is a major contributor to climate change. A shift to organic agriculture is an imperative for our health as well as the planet's health, for climate justice and Earth democracy.



SMALL-SCALE FARMERS FEED A MAJORITY OF THE WORLD WITH ACCESS TO LESS THAN A QUARTER OF THE FARMLAND

THE FUTURE OF FARMING

The philosophy and practice of industrial agriculture, which perceives seeds and soil as nothing but resources that can freely be exploited in order to maximize profits, is rapidly depleting the earth of its ability to regenerate itself. The alternative, ecoagricultural farming, which for many centuries has been feeding a majority of the global population, is based on diversity, reciprocity and a maintenance of the organic relations between humans and their natural environment.







	ECOAGRICULTURAL	INDUSTRIAL
	BIODIVERSITY	MONOCULTURE
	LOCAL VARIETIES	GENETICALLY UNIFORM VARIETIES
	KEEP CARBON IN THE GROUND, REBUILD SOIL FERTILITY AND SUSTAIN YIELDS OVER TIME	WIDESPREAD DEGRADATION OF LAND, WATER & ECOSYSTEMS
	PROVIDING A BASIS FOR SECURE FARM LIVELIHOODS.	FAVOR BIG CORPORATIONS OVER SMALL SCALE FARMERS
SMALL-SCALE, INTEGRATED ORGANIC FARMS ARE MORE RESILIENT IN THE FACE OF CLIMATE CHANGE	DIVERSIFIED AGROECOLOGICAL SYSTEMS CAN ALSO PAVE THE WAY FOR DIVERSE DIETS & IMPROVED HEALTH.	CONTRIBUTE TO PERSISTENT HUNGER AND MICRO-NUTRIENT DEFICIENCIES AND RAPID RISE OF OBESITY AND DIET-RELATED DISEASES
	BENEFITING FARMERS & LOCAL COMMUNITIES	BENEFITING MULTINATIONAL CORPORATIONS & LARGE BUSINESSES
REGENERATIVE ORGANIC FARMING COULD SEQUESTER MORE THAN 100% OF ANNUAL CO_2 EMMISSIONS	PROMOTING FOOD SOVEREIGNTY OF LOCAL FARMERS AND PRODUCERS	REINFORCING ECONOMIC & POLITICAL POWER OF GLOBAL ELITES

That is why at the Paris Meetings on Climate Change (COP21), we collectively planted a garden and made a pact to protect the Earth. Each garden might be small, but when millions join hands, it starts to make a shift beyond fossil carbon, which should be left underground, to living carbon, which we should grow everywhere to heal the earth, create climate resilience and rejuvenation

> ***Industrial agriculture is a major contributor to climate change. A shift to organic agriculture is an imperative for our health as well as the planet's health, for climate justice and Earth democracy.***

Humankind recently passed a very significant threshold, in that more than half of the world population now lives in urban areas. This appears to create a conflict between the environmental benefits of small-scale ecological farming, and the need to feed a population of billions of people who cannot — and often do not want to — grow their own food in their immediate environments. How can we solve this paradox?

Protecting the planet and ensuring food for all are not in opposition to one another. The industrial system that is destroying the health of the planet is also causing hunger, malnutrition and disease. Industrial agriculture has clearly failed as a food system.

Contrary to the myth that small farmers should be wiped out because they are unproductive and we should leave the future of our food in the hands of the poison cartel, surveillance drones and spyware, small farmers are providing 70 percent of global food using 30 percent of the resources that go into agriculture. Industrial agriculture is using 70 percent of the resources to create 24 percent of the greenhouse gas emissions, while providing only 30 percent of our food. This commodity-based agriculture has caused 75 percent of the destruction of soils, 75 percent of the destruction of water resources, and pollution of our lakes, rivers and oceans. Finally, as I set out in my book, *Who Really Feeds the World?* (Zed Books, 2016), 93 percent of crop diversity has been pushed to extinction through industrial agriculture.

At this rate, if the share of industrial agriculture and industrial food in our diet is increased to 45 percent, we will have a dead planet. There will be no life, no food, on a dead planet. That is why rejuvenating and regenerating the planet through ecological processes has become a survival imperative for the human species and all beings. Central to the transition is a shift from fossil fuels and dead carbon, to living processes based on growing and recycling living carbon.

Navdanya's work over the past thirty years has shown that we can grow more food and provide higher incomes to farmers without destroying the environment and killing our peasants. Our study, "Biodiversity-based Organic Farming: A New Paradigm for Food Security and Food Safety," has established that small biodiverse organic farms produce more food and provide higher incomes to farmers.

Moreover, biodiverse organic and local food systems contribute both to mitigation of and adaptation to climate change. Small, biodiverse, organic farms — especially in Third

World countries — are totally fossil-fuel free. Energy for farming operations comes from animal energy. Soil fertility is built by feeding soil organisms through the recycling of organic matter. This reduces greenhouse gas emissions. Biodiverse systems are also more resilient to droughts and floods because they have higher water-holding capacity and hence contribute to adaption to climate change. Navdanya's study on climate change and organic farming has indicated that organic farming increases carbon absorption by up to 55 percent and water-holding capacity by 10 percent, thus contributing to both mitigation and adaptation to climate change.

Rejuvenating and regenerating the planet through ecological processes has become a survival imperative for the human species and all beings. Central to the transition is a shift from fossil fuels and dead carbon, to living processes based on growing and recycling living carbon.

Biodiverse organic farms produce more food and higher incomes than industrial monocultures. Mitigating climate change, conserving biodiversity and increasing food security can thus go hand in hand. Three decades of Navdanya have shown that using native seeds and practicing agro-ecology, small farmers of India can produce enough, healthy, nutritious food for two Indias, and by not spending their precious money on buying poisons, and poison producing GMO seeds, they have the potential of enhancing their incomes tenfold, and stopping farmers suicides. A poison free, debt free, suicide free, hunger and malnutrition free India and world is what I work for. ★

VANDANA SHIVA



***Vandana Shiva** is an Indian scholar, environmental activist, food sovereignty advocate and alter-globalization author. Shiva, currently based in Delhi, has authored more than twenty books, among which* Who Really Feeds the World? *(Zed Books, 2016).*

Indigenous peoples across the planet are on the front lines of the global climate struggle, protecting their ancestral lands and communities against the environmental destruction caused by the fossil fuel industry. Indigenous resistance on Turtle Island – as North America is known to the continent's Original Nations – has focused on limiting the environmental damage caused by extractive industries such as mining and, oil and gas companies. By not allowing mining industries to exploit mineral wealth, or oil and gas companies to build pipelines on their traditional homelands, Indigenous communities have sent a powerful message that they are the true guardians of our Earth.

KLABONA KEEPERS ELDERS SOCIETY

Dedicated to protecting the indigenous resources in Tahltan territory, British Columbia, where Royal Dutch Shell is planning to drill more than 1,000 coalbed methane gas wells.

STANDING ROCK

"Site of the Sioux-led Indigenous resistance against the Dakota Access Pipeline, sparking the largest gathering of native tribes and people since colonization."

INDIGENOUS on Turtle



REDOIL (RESISTING ENVIRONMENTAL DESTRUCTION ON INDIGENOUS LANDS)

A movement of Alaskan Native Tribes who came together to challenge the fossil fuel and mining industries and demand a safe and healthy environment conducive to subsistence.

INDIGENOUS ENVIRONMENTAL NETWORK

Established in 1990, the IEN is the largest Native environmental justice movement in the United States.

IDLE NO MORE

The largest Indigenous mass movement in Canadian history, founded in 2012, aiming to protect Indigenous sovereignty, land and water.

BLACK MESA WATER COALITION

Formed in 2001 by a group of young students to address issues of water depletion, natural resource exploitation, and health promotion within Navajo and Hopi communities

RESISTANCE Island

ELSIPOGTOG FIRST NATION

Defending their land by resisting fracking operations. Resisted paramilitary-style police attack on their protest camp in 2013 by burning five police cars.

UNIST'OT'EN CAMP

Grassroots resistance movement against the construction of Tar Sands and Fracking Gas pipelines through Unist'ot'en territory.

Indigenous people worlwide

5% OF GLOBAL POPULATION

370 MILLION PEOPLE
5000 GROUPS IN 90 COUNTRIES

22% LAND SURFACE

URBAN CENTERS ONLY 3%

80% OF GL. BIODIVERSITY

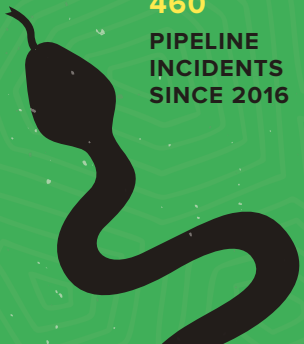
WITHIN OR ADJACENT TO INDIGENOUS LANDS

The Black Snake

A Lakota prophecy speaks of a black snake that will come into their territories and cause destruction to the land and its people. Lakota elders have recognized the Dakota Access Pipeline to be the snake that was prophesied.

116K KM
CRUDE OIL LINES

13M KM
US ENERGY PIPELINE NETWORK

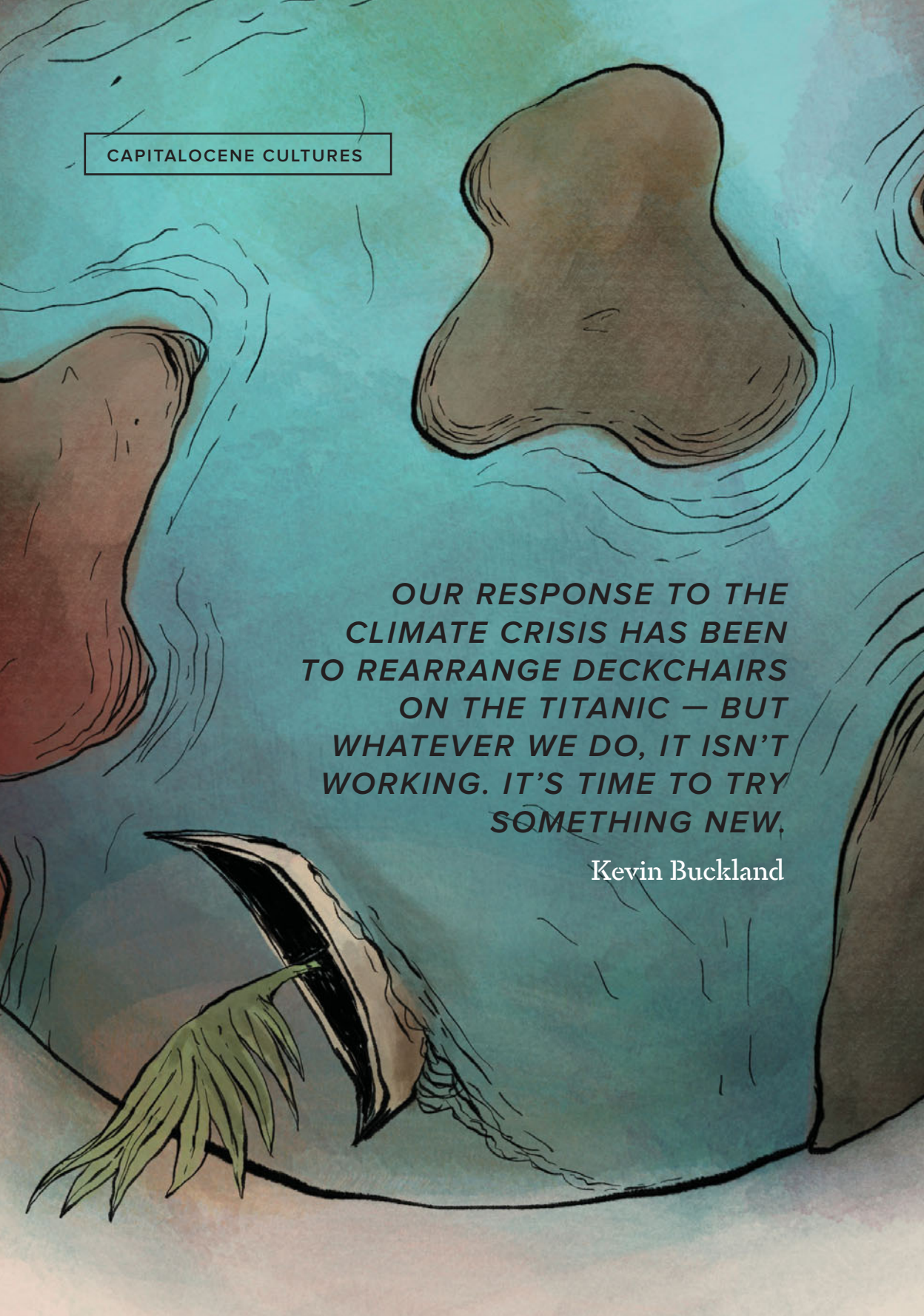


460
PIPELINE INCIDENTS SINCE 2016



A SOLIDARITY RALLY WITH THE DAKOTA ACCESS PIPELINE PROTESTERS ON NOVEMBER 5, 2016 IN CANADA
PHOTO BY ARINDAMBANERJEE / SHUTTERSTOCK.COM


PROTECT
SOLIDARITY


CAPITALOCENE CULTURES
OUR RESPONSE TO THE CLIMATE CRISIS HAS BEEN TO REARRANGE DECKCHAIRS ON THE TITANIC — BUT WHATEVER WE DO, IT ISN'T WORKING. IT'S TIME TO TRY SOMETHING NEW.
Kevin Buckland



THE FUTURE OF THE CLIMATE JUSTICE MOVEMENT

Organizing On a Sinking Ship

Illustration by **Kaan Bağcı**

Climate change rarely comes up at the top of the list when people are asked about issues that concern them most. While this is not surprising, it is nonetheless disturbing considering the gravity of the climate crisis. Yet the key problem of our collective negligence of the climate crisis is reflected in the question itself, rather than the answer. Let us be clear: climate change is not an "issue." Rather, it is now the entirety of the biophysical world of which we are part. It is the physical battleground on which every "issue" is played out — and it is crumbling.

The global justice movement is one of the many actors trying to maneuver on this battlefield, and the direction it is headed in is reshaping the narratives, tactics and structures that comprise it, hinting at the future of social movement organizing on a radically transformed planet. The rules of the game have changed: welcome to the Capitalocene — goodbye to "activism-as-usual." As the climate changes, so must movements if they are to withstand, even thrive, inside the coming cataclysm of winds, waves and wars.

MOVEMENT CULTURES IN THE CAPITALOCENE

The Capitalocene is defined partly by a disappearance of spaces of refuge: there is no escaping this problem, and nowhere to hide. We're all in the same boat. But the boat has crashed into a drifting iceberg, and is sinking fast. Our response to the climate crisis has been to rearrange deckchairs on the Titanic, but whatever we are doing, it isn't working. It's time to try something new. On a sinking ship, one's logic and frames of references must change, just as the traditional frames of the left must evolve in the emerging context of crisis. The struggle is no longer to organize the deckchairs so that we can ensure equal access for all. Rather, the most critical question now becomes: "How can we best organize ourselves to turn as many of these deck-chairs into life rafts?"

> "
>
> ***For years, the climate movement has been trapped between two discordant discourses: between changing light bulbs and global revolution.***

Perhaps as obvious as the climate crisis itself has been the inability of social movements to properly organize around it. For years, the climate movement has been trapped between two discordant discourses: between changing light bulbs and global revolution. On one hand, any action can seem minuscule and ineffective compared to a crisis as big as the entire world. On the other, deep systemic change can seem far too slow for the urgency of the crisis we face.

Yet one cannot "fight climate change" in the absence of such structural transformations, for the climate crisis is itself the result of an extractivist logic based upon an exploitative relationship with the world around us. Long before the industrial revolution, the emerging capitalist world-system was fueled by the exploitation of women, people of color and entire ecosystems.

The climate crisis is the ultimate symptom of this extractivist dynamic, and is an entirely new spe-

cies of crisis that requires our movements to enact an entirely different logic — including entirely different values, morals, assumptions and strategies — if we are to confront it. Confronting climate change means confronting the system and the culture that has caused it, and providing a scalable alternative. More than merely constructing a new politics to confront the "issue" of climate change, the task of the left in the Capitalocene is to cultivate new processes for engagement in politics. The culture of organizing itself becomes key.

If movements in the Capitalocene are to effectively confront this crisis, it means enacting an alternative set of values and organizational principles. The legacy may have less to do with solar panels and community gardens than with incubating scalable organizing cultures that can be shared with allies, volunteers and partners in ways that improve access to justice as we move together into an exponentially tumultuous future. It may just be these cultures, being incubated now inside globally connected movements, that will write the next chapter of human history.

Cultural revolution is not only desired; it is needed. If we fail to offer scalable discursive, tactical and structural alternatives to the extractivist logic that has created the climate crisis, then capitalism may itself transform the coming wave of disruptions into its own benefit, exacerbating existent inequalities for every social and ecological "issue" as it strengthens its stranglehold of the future on a rapidly destabilizing battleground. History is speeding up. It is time to play to win.

SHIFTING NARRATIVES

The climate crisis has reached a critical stage at a strange time. Neoliberalism is devastating the social and ecological commons even as technological change has radically horizontalized media and communication platforms. People are both coming together and being pulled apart. Importantly, communication technologies are creating new social spaces for communities to tell their own stories on a global scale. This is transforming global organizing, allowing once-marginal groups to influence the mainstream environmental discourse that had previously been controlled by a few privileged groups. In recent years, frontline and indigenous groups in particular have managed to shift the narrative. Rather than playing the role of victims in someone else's savior story, they are increasingly reframing themselves as the heroes of their own.

One poignant example comes from some of the most remote places on the planet: the atolls of the low-lying pacific islands. The slogan of the self-named "Pacific Warriors" — "we are not drowning; we are fighting" — attests to the broad narrative shift that is possible when communities are able to speak for themselves. Their organizing has taken different forms, all of which are carefully constructed to be useful not only in building resistance to climate change but also in building resilience by strengthening traditional culture. From using handmade traditional canoes to blockade the world's largest coal port in Australia, to three-day ceremonies outside of the Vatican to a gift-giving ritual with German communities resisting lignite coal mining on the morning of a mass direct action, the Pacific Warriors — and thousands of other front-line and Global South communities — are decolonizing the stories the climate movement is telling itself.

Such narrative shifts have been pulling the global climate justice movement towards a more intersectional systemic analysis. By telling stories of compounded struggles of racism, colonialism and sexism, front-line and indigenous groups are grounding the intangible climate crisis in lived



PROTEST SIGNS AT CATES PARK IN CA WITH A MESSAGE AGAINST THE KINDER MORGAN PIPELINE EXPANSION. ADAM MELNYK / SHUTTERSTOCK.COM

experience. They are pulling climate change out of the atmosphere, into their bodies and out onto the streets. In a small but notable shift, the once marginal slogan — "system change, not climate change" — has now been absorbed into the hegemonic discourse.

SHIFTING POWER

At the same time as front-line and indigenous groups are claiming increasing agency in steering the climate movement, more and more NGOs and "Big Greens" are reassessing their traditional approach and working to take "leadership from the most impacted" and support grassroots movements. This change is important, and it is amplifying stories that need to be told. Yet the same development points to an important structural paradox: how can a top-down organization support bottom-up organizing?

Despite the narrative shift, few mainstream NGOs are making serious efforts to actually embody the structural shift towards horizontality and bottom-up organizing. A rift is opening between discourse and structure, between form and function, between process and product. As movements prepare for the coming destabilization, the structure they use will dictate the scale, scope and depth of their capacity to respond. Any incoherence between discourse and structure that is now a small crack may eventually crack open into full-blown crisis. If movements are to survive, even thrive, in the Capitalocene, they must be looking to build a structural integrity that aligns with their political mission. These organizing structures will set the limits to our collective capacity to respond to the climate crisis.

The structures through which groups organize give body to their politics. In the wake of natural disasters, people find themselves up-



As the scale of the crisis becomes more apparent, people and organizations are turning towards participatory democratic processes, and demand inclusion in the making of decisions that affect their life

rooted and in need. Decisions are made on the basis of urgency, not political preference, and people participate in structures that appear to function in a given social context. An organizational structure's ability to suddenly absorb new people into meaningful participation will determine its success in both disaster relief and in activism, and may function as a door opening up unto a new politics, as people are forced by the nature of events to step outside of their traditional organizing structures.

As the scale of the crisis becomes more apparent, traditional boundaries of tactical differences are falling away. The unraveling world is reminding us just how tightly we are bound together. Children's climate education campaigns, food forests, electoral campaigns and road blockades are at the heart of movement and community efforts that are increasingly embracing an "all hands on deck" approach, carrying collective disobedience into the mainstream. This marks another important cultural shift, as more and more communities challenge not only unjust laws but also start questioning the legitimacy of the process by which laws are written and enforced. People and organizations are pivoting towards participatory democratic processes, and demand inclusion in the making of decisions that affect their life.

Yet for hierarchical organizations like major environmental NGOs, this points to another friction between form and function. Can one truly advocate for external disobedience while internally replicating those same power structures that are to be disobeyed? Can any type of organization coherently advocate for disobedience against decision-makers, yet expect unwavering obedience towards their

own hierarchical and unaccountable internal decision-making structures?

The German movement Ende Gelände has for three years been using a participatory organizing structure to coordinate thousands of people to enter and shut down open-cast coal mines. Their scalable structures have allowed thousands of newcomers to direct action to create safe spaces for participants to engage in actions within their comfort zones. This has only been possible by allowing groups the autonomy to make their own decisions and fostering a culture of co-creation through a participatory organizing process. Taking this politics even further, the Queer Feminist finger has for the last two years been enacting an eco-feminist politics of care by further collectivizing organizing and decision-making processes. Their radical inclusiveness is dependent upon opening participation to decision making, and has been growing exponentially.

SHIFTING STRUCTURES

Environmental struggles are never won. They require constant vigilance. Furthermore, one may defeat a coal-fired power plant in one place only to find it built in a neighboring town — the project hasn't been stopped, just moved. The climate movement, faced with an endless uprising of imposed projects, has been realizing the limitations of the NIMBY ("Not In My Back Yard") frame that could easily see Exxon Mobil construct mega-sized wind parks for shareholder profits rather than local energy. The climate justice movement is at a crucial transition as it pivots from a focus on fixing the problem to addressing the cause; from a discourse focused on "solar panels and wind turbines" to "democratically-controlled renewable energy." As such, the material infrastructure of the coming world is beginning to align with the organizing structures themselves.

> ***"The climate justice movement is at a crucial transition as it pivots from a focus on fixing the problem to addressing the cause; from a discourse focused on of "solar panels and wind turbines" to "democratically-controlled renewable energy."***

This same pivot also aligns the climate movement with the major popular uprisings of recent years, from the Egyptian Revolution to the *indignados* in Spain and Greece, Occupy Wall Street in the US, the Gezi movement in Turkey, the Umbrella Revolution in Taiwan, and far beyond — all part of an overarching participatory process bubbling out of the occupied plazas, squares, parks and airports. These place-based occupations have come and gone, but they have left a deep mark on the political education of a new generation of organizers who, having glimpsed a crack in the façade, are continuing to experiment with radical democratic processes in a growing diversity of forms. As the global climate movement shifts



HERE AND NO FURTHER!

Ende Gelände



Ende Gelände was founded in Germany in 2014 as a broad alliance of people from the anti-nuclear and anti-coal movements that is part of a world-wide uprising against extractivism. The movement sees itself as one of many forms of resistance against Europe's greatest CO_2 producers. What unites the movement is the belief that to stop climate change we need to take action ourselves, using civil disobedience as a powerful signal for real action to put our climate before profit.

We are the investment risk!

The disruptive actions of Ende Gelände that nearly shut down a coal-fired power plant for two days in 2016 were in part intended to bring down the market value of the coal mining region that was up for sale.

2015

1,500 people occupied the Garzweiler coal mine, bringing the excavators to a standstill.

2016

Up to 4,000 activists blocked the Welzow-Süd coal mine and the coal-fired Schwarze Pumpe power station, cutting it down to 20 percent of its power for two days.

2017

3,000 activists blocked the open Hambach pit coal mine, forcing the coal excavators and the conveyor belt to cease operations for a day.

WWW.ENDE-GELAENDE.ORG



towards an increased focus on process and participation, it can play a crucial role in global movements by organizing the physical infrastructure of power generation that embodies these principles.

As movements reframe the process by which they are organizing, it is the battlefield itself that expands, opening up a space that suddenly includes the vast majority of the world's population that has traditionally been excluded from decision-making processes. This transformation, which is already underway, may mark a turning point in history as anti-imperial, anti-sexist, anti-colonial, and anti-racist movements understand themselves as not only part, but leaders of a global insurrection to democratize the physical infrastructure and management of the coming world. It is time to be building bridges, for the waters are rising and there aren't enough boats.

"TRANSITION IS INEVITABLE — JUSTICE IS NOT"

As movements come to terms with the fact that stopping climate change is impossible, they are tackling the hard task of imagining what a "just transition" would actually entail. The US-based broad coalition of environmental justice groups and labor unions, Movement Generation, spent three years tackling precisely this problem by envisioning such an eco-social process. Their strategic framework outlines that:

> *"Just transition is a framework for a shift to an economy that is ecologically sustainable, equitable and just for all its members. After centuries of global plunder, the profit-driven, growth-dependent, industrial economy is severely undermining the life support systems of the planet. An economy based on extracting from a finite system faster than the capacity of the system to regenerate will eventually come to an end — either through collapse or through our intentional re-organization. Transition is inevitable. Justice is not.*

This understanding of the "inevitable transition" is key for movement organizing today. Any group pursuing radical change now has sufficient evidence that such change is not only necessary but urgent. In her eloquently written book, *A Paradise Built in Hell*, Rebecca Solnit shows that while "power" has a history of turning natural disasters into the next process of accumulation, privatization and destruction of the commons, people themselves tend to react very well in disaster. As the world gets turned upside down by a hurricane, earthquake, explosion or fire, values are also turned upside down and the individualism portended by capitalism is commonly replaced by an honest (and remarkably human) altruism. People spend days digging strangers out of rubble, shared food is cooked collectively, harvested from unmanned supermarkets or fields. Collective self-organization becomes key to survival.

As with Occupy Wall Street and Occupy Sandy, structures can lie dormant for years only to spring back to life as they are needed.

Let us be clear: responding adequately to the coming catastrophe will not be easy. Millions are already suffering from the impacts of a crisis they had no role in causing, and the nations and individuals who have grown rich off generations of exploitation will not simply roll over and share their accumulated wealth. From border walls to immigration policies to land grabs to LNG terminals to underground bunkers to private islands and private militaries: those with power and privilege are preparing to protect it.

Far from helping, the state often comes back in to put the genie back into the bottle. This use of force, when so openly directed at the victims, begs the question if those in power are not more afraid of our response to the disaster than of the disaster itself. Solnit comments: "The possibility of paradise hovers on the cusp of coming into being, so much so that it takes powerful forces to keep such a paradise at bay." Do not be conned into thinking that your government is doing nothing about climate change, or that the ultra-rich all believe it to be a hoax. Great preparations are underway for what is coming — they just aren't for you. Instead, they are based upon and aim to reinforce a systemic logic of competition and scarcity.

All major crises leave a power vacuum in their wake. The ability of people to meet their immediate needs through functional participatory structures reveals windows of opportunity for radical change. Often, these same shocks that are used as excuses for neoliberalism to privatize emergency services relocate entire communities or impose economic reforms. Yet each crisis is also an opportunity to enact a different form of politics based on cooperation instead of competition, an opportunity that can provide a glimpse of another possible world. "It's tempting to ask," Solnit cleverly points out, "why if you fed your neighbors during the time of the earthquake and fire, you didn't do so before or after." The climate crisis will provide our movements with clear opportunities to enact their politics and grow by providing a more functional response to the Capitalocene than that of capitalism.

BUILDING LIFE RAFTS

The word "crisis" comes from the classical Greek *krisis*, meaning "decision." Yet despite the powerful slogan to that effect, the main decision we are confronted with is not one of system change or climate change. Climate change is now inevitable and so, therefore, is system change. The decision at hand is how that change will be organized: will it trickle down or will it rise up? Will it be based upon competition or cooperation? While the climate crisis is rapidly becoming a fact of life, the coming "system change" is precisely what has yet to be defined — and it is this decision that will shape the coming generations of human culture and society.

Confronting a crisis as big as the world means reimagining and re-engaging an understanding of collectivity that neoliberalism has not been able to sell or steal. If movements continue to be caught unprepared for the coming and current calamities, we risk letting those most vulnerable fall prey to those with the most privilege and power. The pressures of the climate crisis have the capacity to bring people closer together. Solnit reminds us how, "just as many machines reset themselves to their original settings after a power outage, human beings reset themselves to something

altruistic, communitarian, resourceful and imaginative after a disaster... [W]e revert to something we already know how to do. The possibility of paradise is already within us as a default setting." If movements do not adequately seize on this possibility, however, the future itself will belong to those who have created the problem and who would push us further apart.

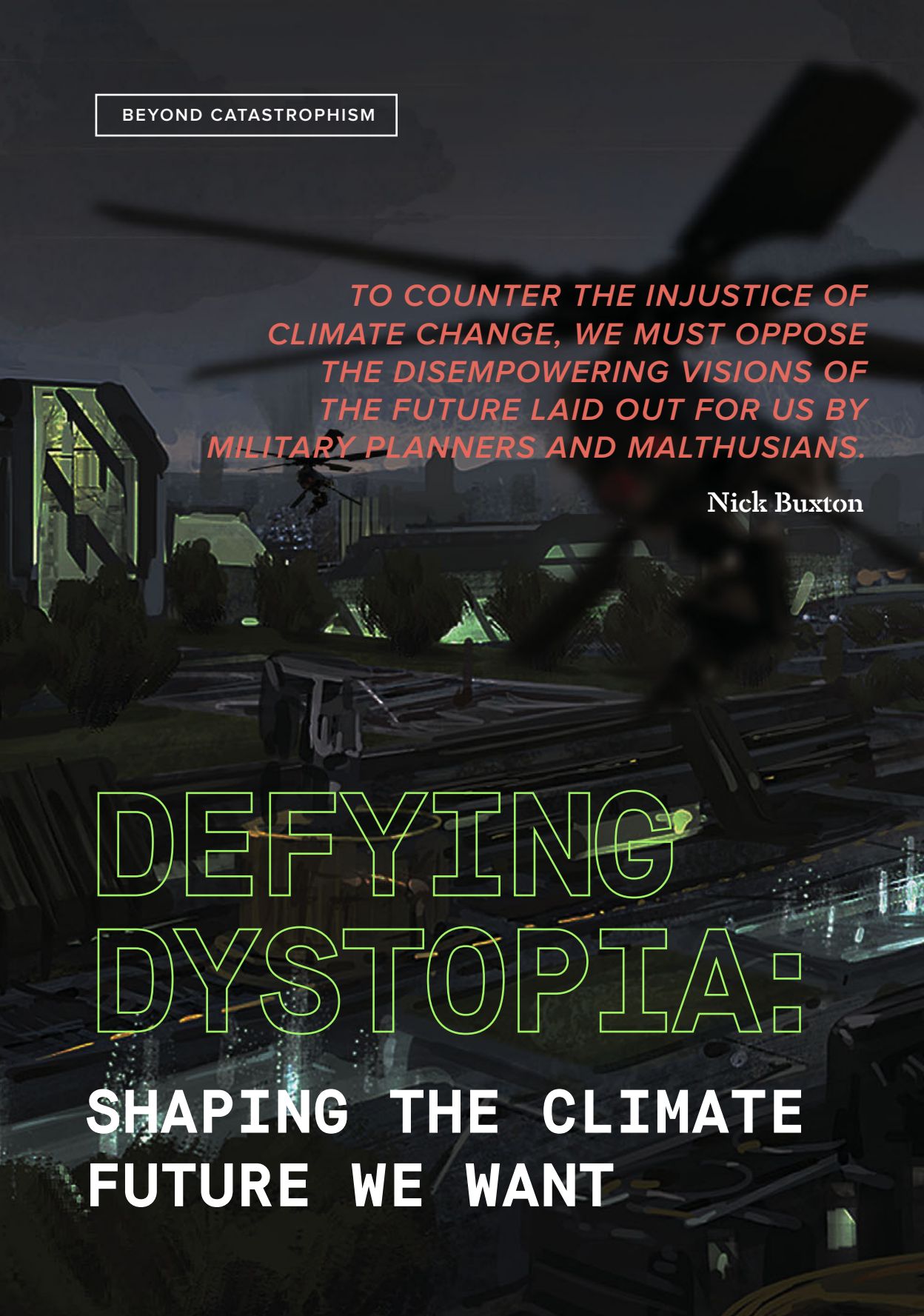
Instead of waiting in line for the captain to give us a place in the lifeboat, perhaps it is time we started deciding — together — how to turn all these deckchairs we've been moving around into life rafts.

As we scramble to adapt to life on a sinking ship, we can see the development of discursive, structural and tactical innovations that hold the potential to allow movements to narrate, enact and defend an alternative future that matches the scale of the crisis. Each crisis that ruptures our communities also ruptures cultural norms, creating an opportunity to organize. Nothing we can do will stop the ship from going under, but we can slow the sinking. Instead of waiting in line for the captain to give us a place in the lifeboat, perhaps it is time we started deciding — together — how to turn all these deckchairs we've been moving around into life rafts. ★

KEVIN BUCKLAND



Kevin Buckland *is a Barcelona-based artivist, storyteller and arts-organizer for the Global Climate Justice movement with 350.org. He is a 2017 guest editor for the Transition Network, and publishes occasionally with the Transnational Institute,* New Internationalist *and others.*



BEYOND CATASTROPHISM

TO COUNTER THE INJUSTICE OF CLIMATE CHANGE, WE MUST OPPOSE THE DISEMPOWERING VISIONS OF THE FUTURE LAID OUT FOR US BY MILITARY PLANNERS AND MALTHUSIANS.

Nick Buxton

DEFYING DYSTOPIA:

SHAPING THE CLIMATE FUTURE WE WANT

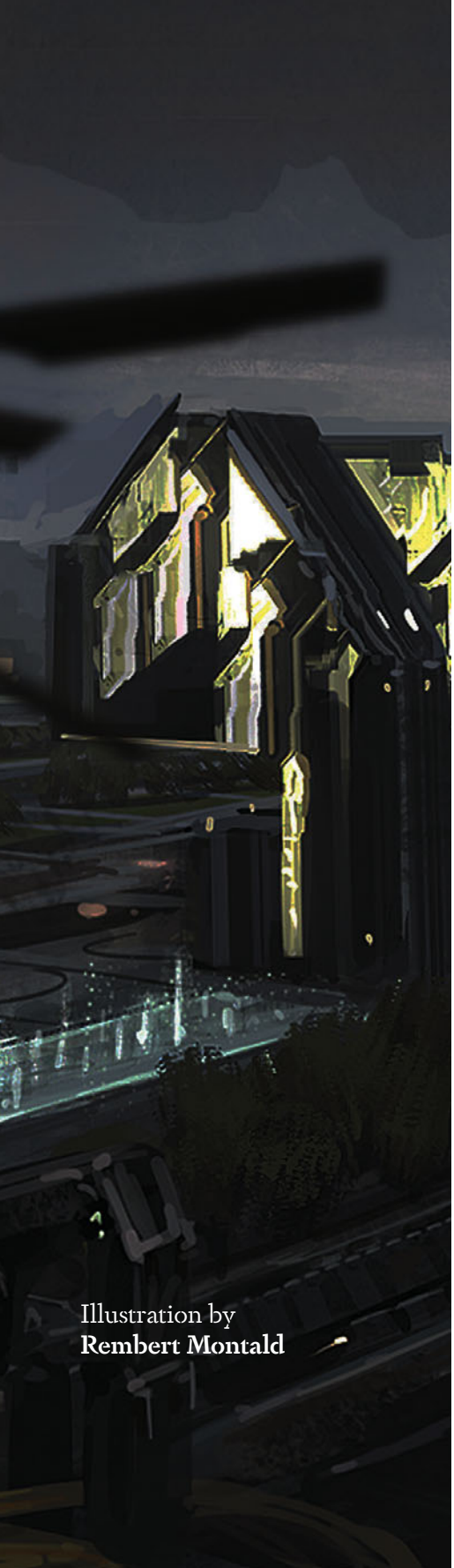


Illustration by
Rembert Montald

We live in an age of dystopias on demand. Whether it's *Black Mirror, The Hunger Games or The Handmaid's Tale*, there is no limit to satiating our desires for dark, apocalyptic visions of the future. Unfortunately the scariest experience does not involve the world of the imaginary; it just requires reading the latest climate science. In one such piece in July 2017, *New York Magazine* managed to pull together all the possible worst-case climate scenarios in a longread called "The Uninhabitable Earth." Through interviews with climate scientists, it painted a world of bacterial plagues escaping from melting ice, devastating droughts and floods so frequent they are just called "weather," and biblical-like tableaus of entire nations on the move. The piece is bleaker than the darkest of sci-fi, because there is no way of dismissing it as fiction.

Facing our fears of climate crisis is one of the biggest challenges we face as activists. Not a week goes by without warnings of an "ice apocalypse" or a "point of no return." We are bombarded with bleak visions of the future. And it's a challenge that we continue to struggle with — one we have mainly filled with demands for action. For a long time, the answer was to provide easy actions that people could take so they could feel empowered. But it was soon evident that no amount of energy-saving lightbulbs was going to halt the capitalist juggernaut. Now the answer, from the left at least, is that we must confront capitalism to overcome climate change. Yet this can hardly be described as an easy win, or likely to allay our fears of a dangerous future.

In the anxious void, we have often not engaged or challenged the visions of the future described by climate scientists or environmentalists. And I don't mean questioning the science, but assessing their expectations of humanity's response to those climate impacts. Do they ac-

curately describe how people behave in the face of disaster? Do they countenance the idea that people might respond in a way that doesn't fit the model of the dystopian dog-eat-dog world? Is it possible that their expectations actually serve the purpose of those determined to repress alternative futures?

APOCALYPTIC STORY-TELLING

I started wondering about this after studying military and corporate strategies for dealing with climate change impacts whose apocalyptic language often mirrors that of the *New York Magazine* piece. In 2007, the Pentagon produced its report, *Age of Consequences*, that looked at varying scenarios for climate change based on different temperature increases. Its mid-level scenario predicted that nations around the world would be "overwhelmed by the scale of change and pernicious challenges, such as pandemic disease." It also warned that "armed conflict between nations over resources, such as the Nile and its tributaries, is likely and nuclear war is possible. The social consequences range from increased religious fervor to outright chaos." A year later, the oil giant Shell released a report, *Scramble and Blueprint*, that forecast a similar Malthusian scramble for resources.

> ***The climate futures described in mainstream adaptation scenarios obscure the fact that the impact of climate change will ultimately not be determined by levels of CO_2, but by structures of power.***

What is striking about all these forecasts of the future is the overwhelming sense of powerlessness that they provoke. This is partly a result of the fear-based narratives that, as behavioral science research has shown, tend to engender hopelessness. But it's also a result of completely ignoring the political structures in which climate change impacts occur, as well as the potential for people to remake those systems.

Rather like a Hollywood disaster movie, such scenarios treat climate change as an all-encompassing dark threat on the horizon that threatens us all, where no one is culpable for what happens next and where no one can truly prepare for and change its impacts. Their sketches of a future in which millions starve from increased temperatures, for exam-

ple, ignore the reality that the present highly concentrated global system of food production and distribution generates more than enough to eat, yet still leaves 815 million people hungry tonight. They similarly ignore how a radical restructuring of our global food regime could provide a much more resilient and effective system for producing and fairly distributing the necessities of life during a time of escalating climate instability.

In short, the climate futures they describe obscure the fact that the impact of climate change will ultimately not be determined by levels of CO_2, but by structures of power. In other words, the exact impact of a climate disaster will depend on political decisions, economic wealth and social systems.

SYRIA: A CLIMATE WAR?

Syria's civil war today is a salutary example of the dangers of envisioning climate futures without consideration of power. In recent years, it has become highly fashionable to describe Syria as a "climate war" and a sign of the conflicts we might expect. The narrative is that extreme drought in the mid-2000s, caused by climate change, forced the migration of farmers, herders and other rural dwellers to the major cities of Damascus and Homs, putting massive pressure on these cities' infrastructure and creating competition for jobs. This then laid the seeds for unrest, instability and ultimately civil war. This story — with varying degrees of nuance — was widely adopted from the US military to Friends of the Earth.

Besides the fact that there is very little evidence to back up the hypothesis, many mainstream accounts conveniently ignore factors such as the role of the Syrian government's neoliberal economic policies in creating social divisions. But the biggest problem is that this explanation diverts attention away from how Assad chose to respond to that unrest, which of course was massive repression of initially peaceful protests that led many groups to turn to violence.

Climate change will undoubtedly have a destabilizing influence on food production, water availability and human livelihoods, but whether any of this transforms into conflict will depend on how political structures respond. An extensive recent study of eleven conflicts in the Mediterranean, Middle East and Sahel confirmed this, showing that rather than climate change, it was the way that governments responded both politically and economically to social and environmental crises, and the lack of democratic participation, that generated conflict.

In the case of Syria, people fleeing the country in the wake of the civil war faced new levels of vulnerability and suffering as refugees. And again, it wasn't the weather but the European Union's hostile border regime that caused the worst impacts. With almost no safe legal routes to Europe, desperate refugees were forced to risk life and limb to migrate. This has led to a horrific death toll, with European policymakers effectively agreeing to turn the Mediterranean into a graveyard to supposedly discourage others. Given that migration is likely to be a critical form of adaptation in the future, the failure by the world's richest countries to deal justly with existing refugees or even to abide by international human rights laws, is a disturbing precedent.

Meanwhile, ten countries outside of the European Union, accounting for less than 2.5 percent of world GDP, have taken in more than half of the world's refugees, showing that economic resources are not the fundamental determination of social support and solidarity.



SECURITY FOR WHOM?

Of course a storytelling that removes politics from the picture serves a purpose, as it strengthens the position of those in power and denies our collective agency to remake the world in a different image. The Pentagon and EU security strategies, developed from these doomsday scenarios, have deemed climate change a "threat multiplier" that will exacerbate conflicts, terrorism and instability. Through the lens of national security, they never question the unjust structuring of power relations that led to the climate crisis. Instead, their plans are about how to protect this unjust order from the instability it has created.

The storytelling in their war-gaming scenarios turns the victims into an amorphous mass, normally quiescent but at the time of climate change potentially restive and a threat. The victims of climate change become "threats" — causes of likely instability and conflict or mass migrations that could overwhelm the borders of the world's richest countries. This further compounds the profound injustice at the heart of climate change that those who contributed the least to causing the crisis will suffer the most. Now, with a "security" response to climate change, the victims face an additional injustice, treated now as threats, to be managed, controlled or eliminated. This tendency looks set to consolidate an existing disturbing global trend in which governments already "treat protest as at best an inconvenience to be controlled or discouraged, and at worst a threat to be extinguished."

By contrast, a storytelling that did consider power relations would turn very quickly to the existing structural causes of climate change. It would show how the United States' vast imperial war machine makes it the world's single largest organizational user of petroleum, and how

> *Through the lens of national security, the Pentagon's and EU's security strategies never question the unjust structuring of power relations that led to the climate crisis. Instead, their plans are about how to protect this unjust order from the instability it has created.*

just 90 corporations are responsible for two-thirds of carbon dioxide in the atmosphere. It would articulate how a just response to climate change would be impossible without tackling these underlying causes. Instead, by predicting scarcity and promising security at a time of chaos, corporate power remains unchallenged and the world's bloated militaries can win even more funding to secure an unjust world order.

It should be no surprise to anyone that military-led climate security strategies are the only vestige of climate policy that has survived under the Trump regime. Trump is merely continuing a dominant dynamic of US policy that has emphasized control of climate change impacts rather than undertaking real solutions based on ambitious, radical reductions of greenhouse gases.

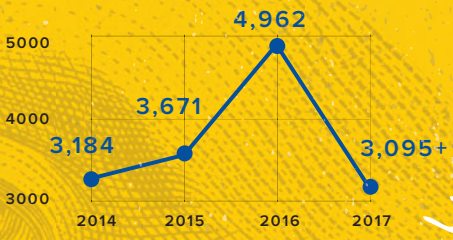
BEYOND LEFT CATASTROPHISM

The left have not been immune to these cultural currents of disempowering doomsaying. There are plenty of leftist and environmentalist writers who seem to relish the catastrophe that approaches us. Take this quote by US journalist Chris Hedges, for example: "We stand on the

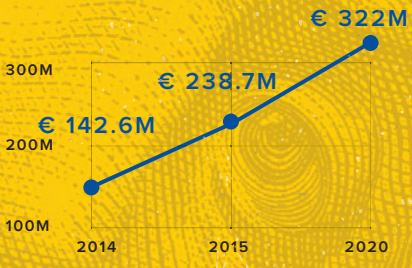
THE EU'S SECURITY FUNDING BOOM



MIGRANT DEATHS IN MEDITERRANEAN:



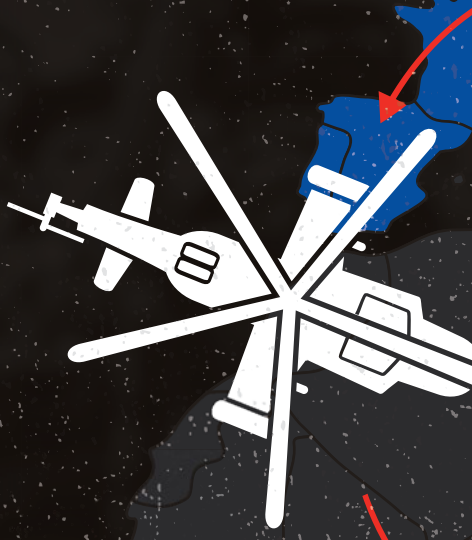
BORDER SECURITY BUDGET FRONTEX:



EXPECTED BUDGET FOR 2020 IS **50X 2005 BUDGET OF €6.3 MILLION**

ARMS EXPORTS LICENCES TO THE MIDDLE EAST AND NORTH AFRICA GRANTED BY EU

€ 82B



€ 95B

FINMECANNICA, THALES & AIRBUS REVENUES IN 2015

THALES
AIRBUS
FINMECCANICA

THREE OF THE TOP EUROPEAN ARMS TRADERS TO THE MIDDLE EAST AND ALSO THE MAIN WINNERS OF EU BORDER SECURITY CONTRACTS.


SECURITIZING
CLIMATE
CHANGE
MILITARIZING
THE REFUGEE
CRISIS
TURKEY (2.5M+)
IRAN
(979.4K)
LEBANON
(1.5M+)
JORDAN
(2.7M+)
PAKISTAN
(1.6M)
CHAD
(369.5K)
ETHIOPIA
(736.1K)
KENYA
(553.9K)
UGANDA
(477.2K)
DRC
(383.1K)
THE WORLD'S
TOP-10 REFUGEE
HOST COUNTRIES
VIA TNI.ORG

cusp of one of the bleakest periods in human history when the bright lights of a civilization blink out and we will descend for decades, if not centuries, into barbarity." The quote not only is nihilistic in its outlook, it is misanthropic in its view of humanity.

The authors of *Catastrophism: The Apocalyptic Politics of Collapse and Rebirth* show how many of these authors draw on either a Malthusian politics (long an affliction of some environmentalists) or a structural-determinist ideology that sees doomsday scenarios as evidence of the impending collapse of capitalism. "Catastrophists tend to believe that an ever-intensified rhetoric of disaster will awaken the masses from their long slumber — if the mechanical failure of the system does not make such struggles superfluous," writes Sasha Lilley.

On the other side of the coin, many environmentalists have sometimes shied away from discussing climate futures all together. This may have been because of fears of looking honestly at the future, or more often because it implicitly suggested defeat from the more urgent task of preventing worsening climate change. However, in so doing, we have left the terrain of the future in the hands of the climate dystopians. The truth is that we cannot avoid facing climate futures, because they are already unfolding now. We can see some of the consequences vividly on our TV screens, such as the hurricanes that swept the Caribbean this summer, or Iran registering a world record-shattering 54 degree Celsius heat wave. But a great deal also happens silently and out of sight, such as the gradual impact that increased heat is having on food production, particularly in tropical areas.

Everything we can do to reduce emissions now — climate mitigation — will reduce how negative the consequences will be. However, we also need to advance a clear radical agenda on how to cope with the inevitable climate change that is already "locked in," drawing attention to issues of redistribution of wealth and resources that will be so critical to responding justly. This is where an anti-capitalist and anti-militarist critique is even more relevant, because transnational corporations, whose very *raison d'être* is profit and plunder, and the military and police, whose *raison d'être* is to protect the current system, are the last institutions any sane person would trust to justly manage climate change impacts. It is why movements, such as the Movement for Black Lives, that challenge state violence and demand that police forces are either accountable or replaced, are so important to support. After all, the ever-more militarized police will be mobilized disproportionately against marginalized communities — as they have always been — in order to protect wealth and property during times of climate instability.

As the environmental activist Tim DeChristopher has argued, "when things get ugly, and access to resources becomes difficult, we want to have trust that those making decisions will act justly, and not just favor the strong. ... We need to start working now on putting in place power structures that share our values as we enter difficult times."

GLOBAL JUSTICE: THE ONLY SOLUTION

There is considerable evidence that putting more democratic power structures in place will not only ensure a more just response, but also prove to be more resilient to climate change impacts. Research on communities coping with climate change shows that those that maximize participation and inclusion are far more likely to provide the flexibility, creativity and collective strength to cope with fast, multiple

changes and stresses. By contrast, unequal societies are far less resilient as they lack interpersonal trust and have weak social bonds, which make collective organizing all the more difficult. In addition, there is growing evidence that gender equity is particularly important for finding peaceful resolutions to resource challenges.

The historical evidence from past weather-related or natural disasters suggests that crises and disasters, far from prompting a dystopian scramble for resources as suggested by military planners, are far more likely to prompt outpourings of support, solidarity and creative community-building efforts. Rebecca Solnit, in *Paradise Built in Hell,* examining five major natural disasters in the twentieth century, recovers amazing stories of people without resources undertaking heroic efforts to protect vulnerable neighbors, developing brilliant collective systems to rebuild communities, and most surprisingly of all finding joy as they weave new meaningful relationships amidst disaster.

There is considerable evidence that putting more democratic power structures in place will not only ensure a more just response, but also prove to be more resilient to climate change impacts.

In fact, she shows how many disasters lead to the building of "mini-utopias" by those most affected. The panic and fear is mainly expressed by elites who assume that the majority are dangerous and a threat to them, evidenced by the media scaremongering of "looting" that appears in the wake of every disaster. Of course, recognizing this does not mean welcoming disasters with their deadly tolls and the disproportionate impact on the most vulnerable. But we can certainly welcome the revolutionary human spirit that emerges in such situations. "If paradise now arises in hell," says Rebecca Solnit, "it's because in the suspension of the usual order and the failure of most systems, we are free to live and act another way."

A belief that communities are best suited to finding their own solutions to the crises and disasters that unfold from climate change means that we can start with a far more empowering and proactive approach to climate disruption, embedded in values of solidarity rather than security. We can learn from Cuba, where highly organized local civil defense committees, backed by central government resources and communications,



IDOMENI, GREECE 2016 REFUGEES PROTEST AT THE GREEK - MACEDONIAN BORDER
GIANNIS PAPANIKOS / SHUTTERSTOCK.COM



> *We must reclaim our agency over the future, knowing that the climate crisis has exposed more starkly than ever before the larger crisis of capitalism and imperial power.*

remain constantly mobilized and prepared for extreme weather. When hurricanes batter the Caribbean nation, as they do with ever greater frequency and ferocity, they ensure that the most vulnerable are kept safe and in the aftermath mobilize the whole community to house the affected and rebuild their homes. When the impoverished country confronted its most powerful hurricane ever, Hurricane Irma in 2017, ten people died — in contrast to its far richer neighbor, the United States, where the same hurricane, although weaker in terms of wind speed, killed over 70.

In the US, an alliance of grassroots community organizations is seeking to implement a similar community-driven response to climate change preparation. It is led by grassroots community justice groups on the front-lines of climate change, such as the multi-racial Gulf South Rising movement that brings together African-American cooperative workers with Vietnamese fisher folk on the Gulf Coast. They argue that just climate resilience will only emerge if cities go beyond consultations and vulnerability assessments to identifying the root systemic causes of vulnerability and embracing leadership and solutions from those communities most likely to suffer climate impacts.

Taj James, a leader within the alliance, says true community resilience is built when there is a "shared collective sense of understanding of where that community is trying to go, and a sense of ownership and agency, ... [including the support] of other communities that are working towards their own self-determination, and understanding of limits of the bioregion in which they are operating."

WALKING TOGETHER, QUESTIONING

None of this is to suggest that the future is rosy or that we can put aside our fears. We need honesty and transparency to move forward. An honest assessment shows that climate destabilization over the coming decades will be incredibly disruptive of the environment on which we depend. It will be a formidable challenge to overcome the entrenched powers that will use this moment to build a militarized eco-apartheid. We also know it will be very costly for the millions of people, disproportionately in the Global South, who will face the most severe consequences. This means learning how to deal with the very real and quite rational emotions of fear and anxiety while unravelling the structures and ideologies that have appropriated that fear.

However, a starting point must be to oppose the disempowering visions of the future laid out for us, whether by military planners or environmentalists. We must reclaim our agency over the future, knowing that the climate crisis has exposed more starkly than ever before the larger crisis of capitalism and imperial power. And that therefore this is a critical opportunity to change direction, both to prevent a worsening climate crisis and to better respond to its impacts. It will require an articulation of a politics that consistently confronts capital and military might, and that looks to return power of all kinds to people. None of this provides guarantees of a better future, but it does kindle hope, which as the late art critic and activist John Berger once said is "a form of energy, and very frequently that energy is strongest in circumstances that are very dark." ★

NICK BUXTON



Nick Buxton *is co-editor of* The Secure and the Dispossessed: How the Military and Corporations are Shaping a Climate-Changed World *(Pluto Press, 2015) and coordinator of the Transnational Institute's work with scholar-activists (www.climatesecurityagenda.org).*


WB

time to pull the plugs

CAPITAL WILL NOT LEAD THE EXIT FROM THE FOSSIL ECONOMY. ONLY A MOVEMENT OF MOVEMENTS CAN AMASS A SOCIAL POWER GREATER THAN THE ENEMY'S IN THE LITTLE TIME THAT IS LEFT.

Andreas Malm

Illustration by **Zoran Svilar**

RETURN TO THE FLOW

Our best hope now is an immediate return to the flow. CO_2 emissions have to be brought close to zero: some sources of energy that do not produce any emissions bathe the Earth in an untapped glow. The sun strikes the planet with more energy in a single hour than humans consume in a year. Put differently, the rate at which the Earth intercepts sunlight is nearly 10,000 times greater than the entire energy flux humans currently muster — a purely theoretical potential, of course, but even if unsuitable locations are excluded, there remains a flow of solar energy a thousand times larger than the annual consumption of the stock of fossil fuels.

The flow of wind alone can also power the world. It has nothing like the overwhelming capacity of direct solar radiation, but estimates of the technically available supply range from one to twenty-four times total current energy demand. Other renewable sources — geothermal, tidal, wave, water — can make significant contributions, but fall short of the promises of solar and wind. If running water constituted the main stream of the flow before the fossil economy, light and air may do so after it.

A TRANSITION TO THE FLOW

How fast could a transition to the flow — all those sources of energy originating in the sun and flowing through the biosphere — be implemented? In the most comprehensive study to date, American researchers Mark Z. Jacobson and Mark A. Delucchi suggest that all new energy could come from wind, solar, geothermal, tidal and hydroelectric installations by 2030. Reorienting manufacturing capabilities towards their needs, the world would not have to build one more coal-fired — or even nuclear — power plant, gasworks, internal combustion engine or petrol station. After another two decades, all old equipment based on the stock could be taken off-line, so that by 2050 the entire world economy — manufacturing, transportation, heating: everything — would run on renewable electricity, roughly 90 percent of which the sun and the wind would provide. The job could be done by technologies already developed.

> ***In what is perhaps the only subfield of the climate debate bristling with optimism and near-utopian zeal, experts predict that both solar and wind will be generally cheaper than fossil fuels sometime before 2025.***

In the real world, the flow does seem to be undergoing something of a boom, output of wind and solar growing exponentially year after year. Despite the financial crisis, global wind-power capacity increased by 32 percent in 2009; for photovoltaics — popularly known as solar panels — the figure reached 53 percent. In the eighteen months ending in April 2014, more solar power was adopted in the US than in the previous thirty years; in 2013, 100 percent of the fresh electricity in Massachusetts and Vermont came from the sun, while China installed more photovoltaics than any country had ever done before in a single year.

Yet the flow remained a drop in the fossil bucket, evidently doing nothing to dampen the emissions explosion. Between 1990 and 2008 — from the first to the fourth IPCC report — 57 times more fossil than renewable energy came online in the world economy; by 2008, wind represented a trifling 1.1 percent and photovoltaics a microscopic 0.06 percent of primary energy supply; excluding hydropower, renewable sources generated a mere 3 percent of the electricity. In 2013, more energy entered

the world economy from coal than from any other fuel. How can this be? Why is humanity not running for life out of the fossil economy towards one based on the flow? What impediments block its way?

A prime suspect is price: fossil fuels simply remain cheaper. And indeed, one decade into the millennium, renewable sources still cost more on average than the conventional incumbents. But the gap narrowed fast. In many parts of the US, onshore wind was already neck and neck with fossil energy, the price of turbines having fallen by 5 percent per annum for thirty years. Photovoltaics crashed at double that speed. In 2014, after a fall of 60 percent in only three years, solar panels cost one-hundredth of what they did in 1975. In nineteen regional and national markets, they had attained "grid parity," meaning that they matched or undercut conventional sources without the support of subsidies.

Had it not been for state subsidies to fossil energy — six times larger than those to renewables in 2013 and showing no signs of decreasing — sun and wind might have had significantly lower relative prices. Had the costs of climate change, air pollution, lethal accidents and other "externalities" been included in the market price of fossil fuels, they would not have stood a chance.

The ongoing collapse in the prices of the flow is, at bottom, a function of its profile: the fuel is already there, free for the taking, a "gift of nature" or *Gratisnaturkraft,* to speak with Marx. The only thing that has exchange value is the technology for capturing, converting and storing the energy of the fuel, and like all technologies, it is subject to economies of scale: mass production slashes the costs of panels and turbines. Every time the cumulative volume of photovoltaic installations has doubled, their market prices have declined by roughly 20 percent.

Moreover, there are numerous potentials for increasing performance and further cutting costs. In what is perhaps the only subfield of the climate debate bristling with optimism and near-utopian zeal, experts predict that both solar and wind will be generally cheaper than fossil fuels sometime before 2025. There is talk of approaching "peak fossil fuels," beyond which coal, oil and gas will be left in the ground simply because they cost so much more than their clean alternatives.

WOES OF THE *GRATISNATURKRAFT*

Now, it is easy to imagine that falling prices must be an unadulterated blessing for solar and wind. Alas, the outcome is not so straightforward.

In the early twenty-first century, two of the largest players in the solar industry were BP and Shell, both of which used their newfound inclinations to great PR effect, BP rebranding itself "Beyond Petroleum" and Shell printing double-page adverts on its faith in a "new energy future." For a time, these oil giants were the second- and fourth-largest manufacturers of solar panels in the world, apparently determined to throw their humongous resources into the sector: exactly what it needed for expansion.

But in 2006, Shell sold its solar subsidiary. In 2008, it pulled out of the London Array, slated to become the largest offshore wind farm in the world, and the following year, the corporation announced its complete exit: there would be no more investment in solar or wind. Why? "They continue to struggle to compete with the other investments in our portfolio" — oil and gas, that

is — said spokesperson Linda Cook. BP gradually closed down its panel factories, complained in 2011 that it "can't make any money" on the sun and, two years later, followed Shell's lead: "We have thrown in the towel on solar. Not that solar energy isn't a viable energy source, but we worked at it for 35 years, and we really never made money," CEO Bob Dudley explained, going on to sell off the company's entire US wind business for good measure.

More specifically, both corporations attributed their pullouts from the sun to the plummeting prices on panels. Since they could not extract the fuel and sell it on the market, the only thing amenable to self-expanding value would be manufacturing the technology; the margins were squeezed year after year, however, until little if any profit remained — a tendency with no equivalent in their core business. "BP couldn't make it [solar] profitable. They couldn't keep pace with the industry, and didn't like the capital allocation required. When oil is $100 per barrel, the board wants to stay focused on what they do to maximize earnings," a former strategist at BP Alternative Energy recalled as the reasoning behind the decision: for someone who is in it to make a profit, a high and stable price is better than a low and falling one.

"In the oil market, the prices are going up and down in cycles. The solar price is just going one way — it's going down," lamented one former executive at the defunct Shell Solar, restating the case for eternal fixed capital based on the stock: "Oil companies invest in plants that should work for thirty years, whereas an investment in a solar manufacturing plant can be uncompetitive in five years. That kills the enthusiasm of oil companies."

But not only inveterate oil companies seem to shun a flow on the way to becoming cheap

Investing in renewables in 2016

+10 GW

Record installation of renewable power capacity worldwide, 127.5 GW (2015) to 138.5 GW (2016) .

$113.7B

New investment in solar energy, down 34% compared to 2015.

$112.5B

New investment in wind energy, down 9% compared to 2015

$72.7B

Spent on acquisition of wind farms and solar parks.

$4.1B

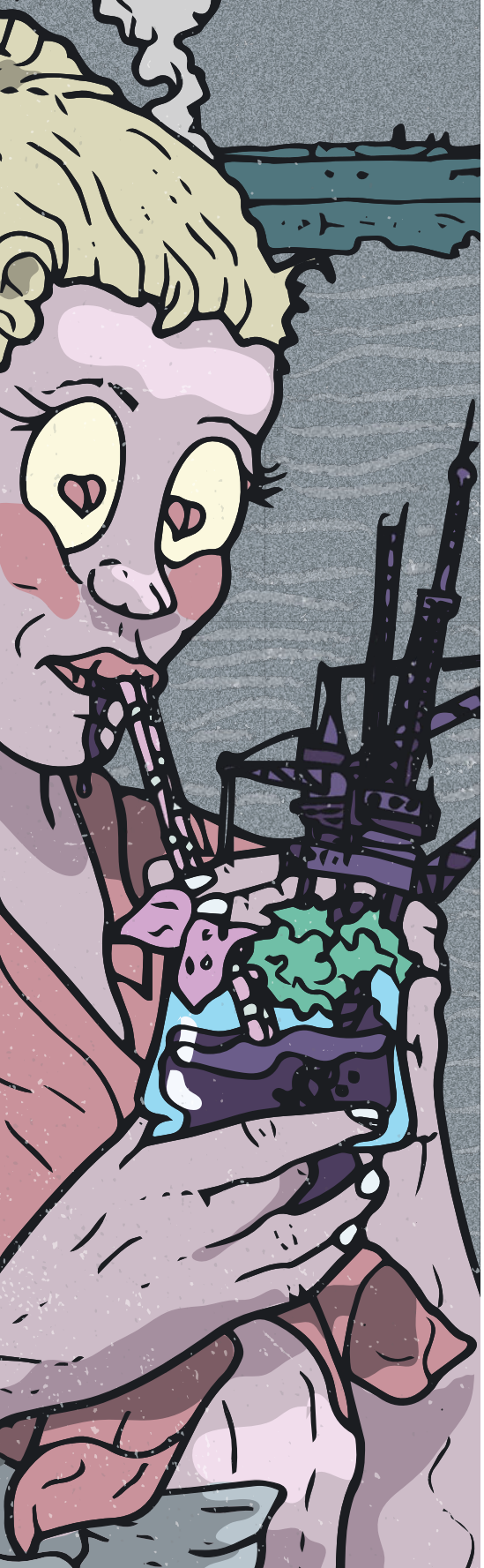
China invested $4.1 billion in offshore wind energy.

11.3%

Proportion of global electricity from renewable sources.

-23%

Global investment in renewable energy fell by 23% to $241.6 billion.



to ultra-cheap. In 2012, Siemens said it would bury its solar interests due to the plunging prices; Bosch headed in the same direction; Solon, the first publicly traded solar company in Germany, went bankrupt. A more highly publicized death was that of Solyndra, a California solar company, whose factory couldn't withstand the competition from panel manufacturers in China: first stimulated by the German market, then by state credits in the wake of the financial crisis, Chinese panel factories excelling in mass production developed overcapacity. This would sound like another blessing for a species that needs solar power now more than ever, but it rattled the industry, set off a string of bankruptcies — including in China itself, where the head of one defaulting company leapt to his death — and prompted the EU to impose import tariffs, destroying the appetite of capitalists of all hues.

> *"Oil companies invest in plants that should work for thirty years, whereas an investment in a solar manufacturing plant can be uncompetitive in five years. That kills the enthusiasm of oil companies."*

From a peak in 2011 to the year of 2013, global investments in renewable energy fell by 23 percent. In Europe, the figure was a stunning

44 percent. Solar tumbled; wind proved more resilient; venture capital and private equity steered clear of the razor-thin margins, their involvement in the sector reduced to 2005 levels. Had it not been for government spending — still rising, but just barely — the fall would have been even steeper.

Due to the prices of photovoltaics and turbines dropping even more quickly, these years nonetheless saw growing volumes of actually installed capacity, but that offered scant solace to an actor like Bloomberg New Energy Finance: "The decline in investment was disappointing for the industry and those hoping to see investors and financiers increasing their dollar commitments to the decarbonization of the energy system." In other words, capital did not engage in the transition as many had expected it would, largely because energy from the flow lost so much of its exchange-value at the very same time that its social use-value — slowing down climate change — rose towards priceless heights.

OVERCOMING THE LAUDERDALE PARADOX

It is too early to tell if these trends will persist, but we do here discern the contours of a version of the "Lauderdale paradox": the less exchange value that is attached to a necessity of life — such as light or air — the less interest capital will have in producing it as a commodity for the market. Or, the more the price of energy from the flow approaches the zero cost of the fuel, the smaller the prospects of making profit and the more deficient the private investments will be. If this is correct, a realization of the potential of solar and wind on the basis of capitalist property relations would, at some point, become another self-undermining, involuting enterprise.

The spatiotemporal profile of the flow does not allow for anything as lucrative as the primitive accumulation of fossil capital: since the fuel is not hidden away in a separate chamber, but rather hangs like a fruit for anyone to pick, there is little surplus-value to extract in its production — no gap between the location of the energy source and that of the consumers in which the chasm between capital and labor could be reproduced. To some, *res communes* remain off-putting. There thus appears to be a general catch-22 freezing the transition (or, as it is often and appropriately referred to, the exit). Should we manage to get out, relations would seem to have to move in a more communal direction — in line with the concrete profile or the communist tendency of the flow.

The *res communes* of water, light and air are still in a "state of continual motion and ceaseless change," with Blackstone; or "of a vague and fugitive nature," in the words of a French legal scholar. The capture of their forces appears technically viable today, but only on condition of planning and coordination on a level unknown today.

The first thing to keep in mind here is that any transition requires investments on a scale out of the ordinary. While they might yield cheaper electricity in the long run, technologies for concentrating the flow can only be put into operation at high initial costs. Numbers fly around — the International Energy Agency (IEA) says the world should spend 1 trillion dollars per year until 2050 to shift to renewables — but however one counts, it is evident that the investments needed are colossal and that capital is not rising to the occasion: total spending in 2012 amounted to one-third of the level posited by the IEA. If the decisions remain in the hands of private agents, all indications are that too little will happen too late.

Not that there is a lack of money: the financial players of the world have hundreds of trillions of dollars at their disposal. Not that they shun risky projects: they are willing to gamble their fortunes on the most hazardous speculation. Instead, as Swedish researchers Robin and Staffan Jacobsson argue, the dynamics of financialization have made private investors utterly unfit to bankroll a transition, the chase for instant profit taking them ever further from a super grid or an offshore farm. When the average stock is owned for a mere twenty-two seconds, why would they underwrite a long-term project for exploiting the flow with little in the way of guaranteed revenues?

There appears to be a general catch-22 freezing the exit from fossil fuels. Should we manage to get out, relations would seem to have to move in a more communal direction — in line with the concrete profile or the communist tendency of the flow.

Abandoning the illusions, Jacobsson and Jacobsson recommend that the states pick up two sledgehammers: a complete restructuring of the financial sector and the founding of public investment banks with massive lending capacity. Then the infrastructure could be built from the ground up.

THE INEVITABILITY OF PLANNING

If states alone are fit to commit to the investments, so only states and other public authorities — like municipalities — can make the imperative decisions. But as Naomi Klein maps out in detail, the entire logic of neoliberalism runs counter to the basic requirements of the transition: instead of resources for investment, we get ever more famished public coffers; the opposite of intervention, states have systematically deregulated markets; loathing the mere thought of extending their influence, they give up one sector after another to private agents. The fact that scientists awakened to the magnitude of global warming and called for a drastic change of course just as governments, under neoliberal hypnosis, surrendered the very idea of interfering with the self-driving market is indeed — another key aspect of climate temporality — an "epic case of bad historical timing."





These insights are shared by less radical thinkers. A U-turn to renewables can be realized solely by means of "concerted social and political efforts beyond the traditional sorts of economic incentives," in the restrained words of Jacobson and Delucchi. Even Anthony Giddens, who can hardly be accused of communist sympathies, recognizes that the powers of the state "have to be invoked if a serious impact on global warming is to be made": there must be a "return to planning, in some guise or other." In the Soviet Union, the five-year plans often missed their targets; we need plans that do not. There is no alternative: planning is "inevitable." It has to cut far deeper into our economies than any prevailing paradigm permits, and even deeper once the signal dimension of climate change — time — is fully taken on board.

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There is no alternative: planning is "inevitable." It has to cut far deeper into our economies than any prevailing paradigm permits.

The more CO_2 that has been released into the atmosphere, the smaller the scope remains for limiting global warming. Consider the 2 degree target, not as a threshold to dangerous global warming — we are well within its field of force — but rather as a demarcation between the dangerous and the extremely dangerous, beyond which positive feedback mechanisms might run amok. To have at least a reasonable chance of maintaining an orderly civilization, we should keep the rise in average temperature below that line; the emissions explosion of the early twenty-first century, however, has pushed the climate system perilously close to it. The carbon budget for 2 degrees is in the process of being consumed: if global emissions remain at 2014 levels, it will be entirely exhausted within thirty years.

But emissions are, of course, growing fast; current projections suggest a continued growth of upwards of 3 percent throughout the second decade of the twenty-first century. Only a narrow field for a war of maneuver is still there. According to the latest scientific consensus, global emissions would have to peak before 2020 and then decrease by at least 3 percent per year — the same pace at which they currently increase, the explosion inverted into a flood of cuts, business-as-usual completely reversed. What if the peak occurred after 2020, perhaps ten or twenty years later? Then the emissions would have to be slashed even more brutally, if anyone then still dares to aim for 2 degrees. Such is the subversive, immutable arithmetic of climate change.

TOWARDS A WAR ECONOMY?

It tightens the screws on Marxists as much as on everyone else. Any argument along the lines of "one solution — revolution" or, less abbreviated, "socialist property relations are necessary to combat climate change" is now untenable. The experiences of the past two centuries indicate that socialism is an excruciatingly difficult condition to achieve; any proposal to build it on a world scale before 2020 and then start cutting emissions would be not only laughable, but reckless. At this moment in time, the purpose of an inquiry into the climatic destructivity of capitalist property relations can only be a realistic assessment of the obstacles to the transition. They grow higher by the day.

But if the temporality of climate change compels revolutionaries to be a little pragmatic, it obliges others to start pondering revolutionary measures. Had the dismantling of the fossil economy begun, say, after the UNFCCC was signed in 1992, when the CO_2 concentration in the atmosphere was 355 parts per million rather than the current 400, the trick might have at least hypothetically been made with some gentle nudging of the market — a little tax here, a little tariff there, some discounts for electric vehicles — but the longer the postponement, the more dramatic the demolition must be when it starts.

If global emissions are to contract by 3 percent a year, those of rich nations might have to shrink by 5 or 10 percent or even more to give developing countries some space. According to Kevin Anderson, distinguished expert on mitigation scenarios, humanity might retain a 50 percent chance of staying below 2 degrees if emissions hit zero before 2045, but then "flying, driving, heating our homes, using our appliances, basically everything we do, would need to be zero carbon — and note, zero carbon means zero carbon." Cuts of this magnitude have no historical precedent. The collapse of the Soviet Union set the record, with emissions dropping by 5 percent for a couple of years in the 1990s. How, then, could such a last-ditch effort possibly succeed?

Anderson states the obvious: the market cannot do it. "Conventional market economics is premised on understanding and making small (marginal) changes. But with climate change, we are not talking about small changes; we are dealing with a world of very large changes, outside the realm of standard market theory." The alternative? "Planned economic recession," claim Anderson and his colleague Alice Bows. They do not say it loud, but a planned economic recession would of course objectively constitute a war against capital.

A popular analogy is that of the Second World War. In one of the most clear-sighted papers on climate politics so far, Australian researchers Laurence L. Delina and Mark Diesendorf lay out the case for wartime mobilization as a model for rapid abatement of climate change. Conjuring up an enormous defense budget after Pearl Harbor, the American state planned and enforced the production of everything from airplanes to ammunition. The executive branch of the government directed the resources of the nation, summoned labor, requisitioned properties, forced manufacturers to accept contracts, terminated the production of certain goods — notably private cars — and, in short, mobilized the economy *in toto* for the sole aim of defeating the enemy.

When the task is to cut emissions by some 10 percent per year, nothing less is required than a similar centralization of economic decision-making power under "a special Ministry for Transition to a Low-Carbon Future." Given exceptional prerogatives, that ministry would



raise funds, redirect labor, speed up R&D, sequester fixed capital based on the stock, organize mass production of everything from buses to CSP mirrors and roll out the full powers of the flow.

Annual emissions cuts of a set quantity could be executed against the will of fossil capital and its representatives. Delina and Diesendorf estimate that such regimes could bring the transition to its zero-carbon conclusion within twenty-five to thirty years in developed countries and perhaps forty in the world as a whole. Four political entities — the US, the EU, China and India — currently account for more than half of all emissions: set up one special ministry in each and we would be on our way.

The Second World War analogy has its limitations, however. Big business had little to lose from entering the war. A zero-hour transition to the flow would have to be imposed by forces antagonistic to the interests of fossil capital: in the absence of a mass movement, "it seems unlikely that governments will undertake emergency mitigation, even when life-threatening climate disasters occur." For some forces, a planned economy for power is an absolute abomination. They will fight the idea, come flood or drought.

ACTIVATING THE EMERGENCY BREAK

Enter Naomi Klein, who bases her call to revolt on the proposition that "we are stuck because the actions that would give us the best chance of averting catastrophe — and would benefit the vast majority — are extremely threatening to an elite minority." From this standpoint, climate change is not so much a surprising reversal of fortunes as a *lifting of the veil* on the social power relations undergirding two centuries of

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Climate change is not so much a surprising reversal of fortunes as a lifting of the veil on two centuries of fossil capital. The truth has been hidden from view; the present moment reveals the meaning of what has been going on for a long time.

fossil capital — which is, of course, the literal meaning of the Greek word *apokalyptein*. The truth has been hidden from view; the present moment reveals the meaning of what has been going on for a long time.

Walter Benjamin's angel of history "sees one single catastrophe, which keeps piling wreckage upon wreckage and hurls it at its feet"; Theodor Adorno concurs — "normality is death" — but emphasizes that the eternity of horror "manifests itself in the fact that each of its new forms outdoes the old. What is constant is not an invariable quantity of suffering, but its progress towards hell: *that is the meaning of the thesis of the intensification of antagonisms."*

Why engage in a lost cause?, sceptics might ask of the struggle against climate change, and not without reason. But fighting from a position of defeat is nothing new: global warming is itself a sum of lost causes. Commoners and Luddites and plug drawers and innumerable other vanquished challengers counsel us to rethink "the moment of the danger" as extreme and unprecedented by *dint* of being the latest manifestation of the past. Or, in Benjamin's supremely visionary words: "The only historian capable of fanning the spark of hope in the past is the one who is firmly convinced that *even the dead* will not be safe from the enemy if he is victorious. And this enemy has never ceased to be victorious."

Benjamin's conception of history — his voluntaristic messianism, organized pessimism, revolutionary melancholia — draws its inspiration from the heritage of the oppressed in order to derail the ultimate disaster of the present. And

what is needed today, if not some global edition of the Plug Plot Riots? Go and stop the smoke!

That might seem like an exceedingly improbable event, but political action can never be based on probability calculations — that would be swimming with the tide or sailing with the storm. At the time of this writing, a global climate movement is gathering momentum. It should be the *movement of movements*, at the top of the food chain, on a mission to protect the very existence of the terrain on which all others operate. But the question is — as so many have pointed out — whether it can attain that status and amass a social power larger than the enemy's *in the little time that is left.*

> ***The global climate movement should be the movement of movements, on a mission to protect the very existence of the terrain on which all others operate.***

But then again, every truly revolutionary movement has faced a similar predicament, as understood by Benjamin. "Marx says that revolutions are the locomotive of world history. But perhaps it is quite otherwise. Perhaps revolutions are an attempt by the passengers on this train — namely, the human race — to activate the emergency brake." The prospects are dismal: hence the need to spring into action. As in previous emergencies, but now more than ever, as we soar above 400 ppm, we must "accept symptoms of collapse as the quintessence of stability and see salvation alone as something so extraordinary as to pass understanding and verge on the miraculous." The only ones with at least a hypothetical ability to conjure up that miracle are humans. ★

This essay is an abridged excerpt from Andreas Malm's award-winning book, Fossil Capital: The Rise of Steam Power and the Roots of Global Warming *(Verso, 2016).*

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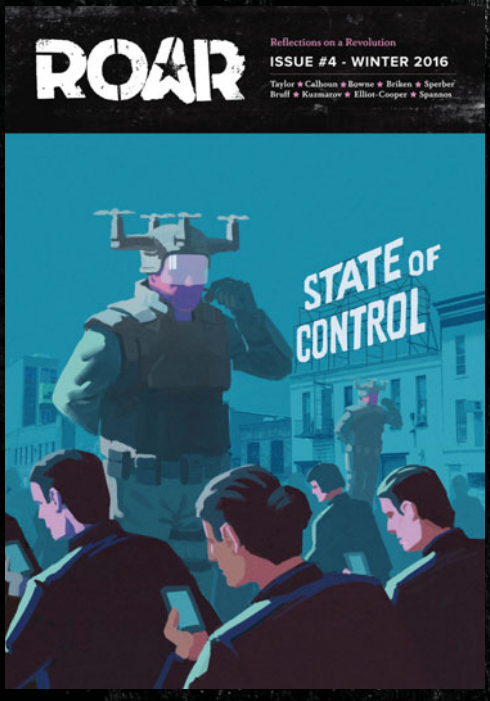
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